

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :								
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11432182					
		Catalog # :	20012ST3QIERB449T-W2					
Frame	: 447/9T	Cooling method	: IC411 - TEFC					
Insulation class	: F	Mounting	: F-1					
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)					
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line					
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 2862 lb					
Protection degree	: IP55	Moment of inertia (J)	: 145 sq.ft.lb					
Design	: B							
Output [HP]	200	175	175	175	200	200	200	
Poles	6	6	6	6	6	6	6	
Frequency [Hz]	60	50	50	50	50	50	50	
Rated voltage [V]	460	380	400	415	380	400	415	
Rated current [A]	237	250	243	236	285	273	265	
L. R. Amperes [A]	1446	1375	1507	1581	1340	1474	1564	
LRC [A]	6.1x(Code G)	5.5x(Code F)	6.2x(Code G)	6.7x(Code H)	4.7x(Code D)	5.4x(Code F)	5.9x(Code G)	
No load current [A]	85.0	83.9	91.0	96.0	83.9	91.0	96.0	
Rated speed [RPM]	1185	980	980	980	980	980	980	
Slip [%]	1.25	2.00	2.00	2.00	2.00	2.00	2.00	
Rated torque [ft.lb]	886	938	938	938	1070	1070	1070	
Locked rotor torque [%]	220	200	220	240	170	190	210	
Breakdown torque [%]	240	220	240	260	190	210	229	
Service factor	1.15	1.00	1.00	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K	
Locked rotor time	27s (cold) 15s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	
Noise level ²	70.0 dB(A)							
Efficiency (%)	25%	94.5	94.5	93.9	92.8	94.8	94.3	93.4
	50%	95.0	94.4	94.1	93.4	94.5	94.5	94.0
	75%	95.4	94.6	94.6	94.4	94.5	94.5	94.5
	100%	95.8	94.3	94.6	94.8	94.0	94.5	95.0
Power Factor	25%	0.45	0.46	0.43	0.40	0.51	0.47	0.45
	50%	0.68	0.69	0.66	0.63	0.74	0.71	0.68
	75%	0.79	0.81	0.79	0.76	0.83	0.81	0.79
	100%	0.83	0.85	0.83	0.82	0.85	0.84	0.83
Bearing type	: NU-322 C3	6319 C3	Foundation loads					
Sealing	: Inpro/Seal	Inpro/Seal	Max. traction	: 5140 lb				
Lubrication interval	: 7000 h	13000 h	Max. compression	: 8002 lb				
Lubricant amount	: 60 g	45 g						
Lubricant type	: Mobil Polyrex EM							
Notes								
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.				These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.				
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



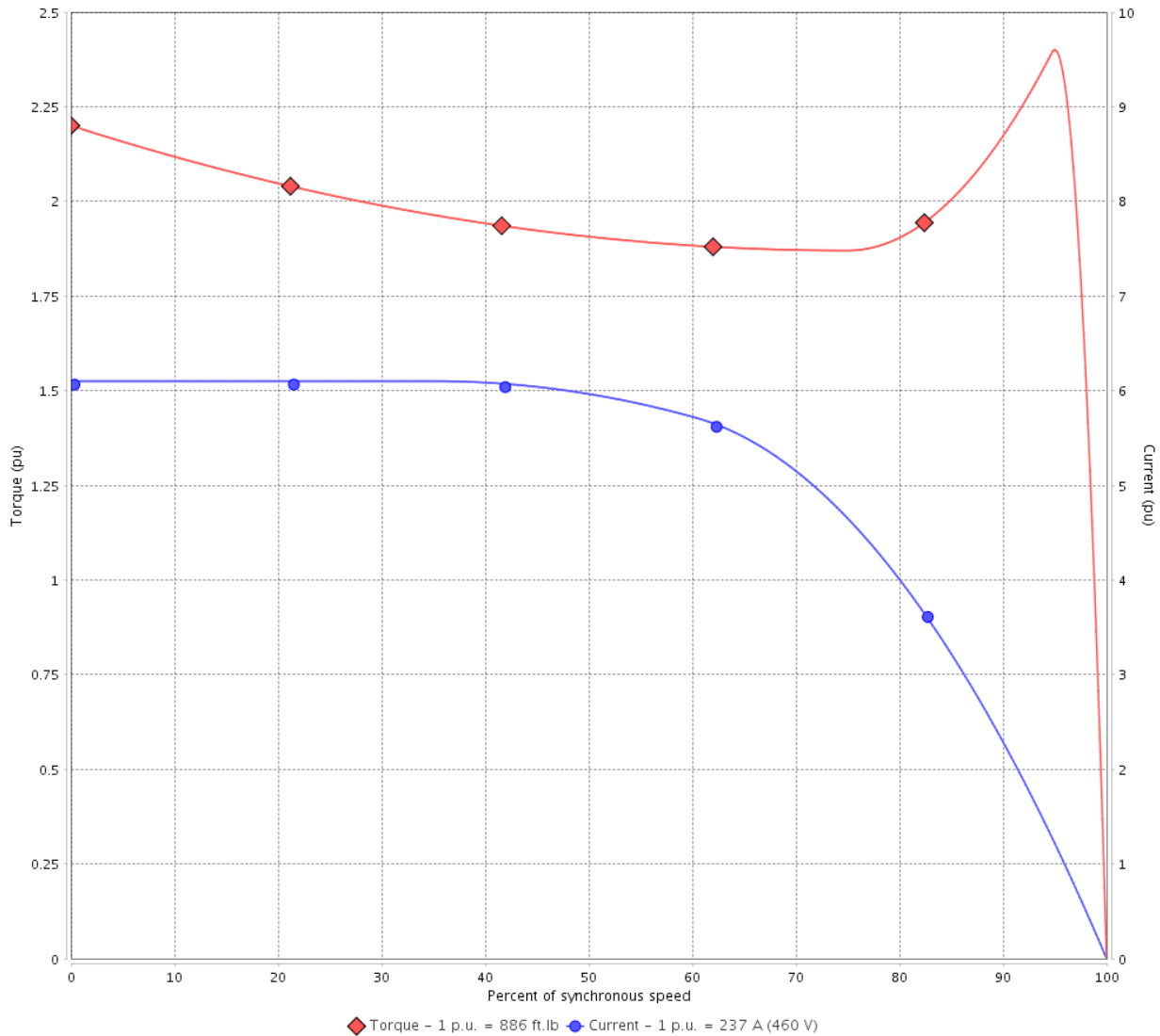
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 6P

Rated current	: 237 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 886 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



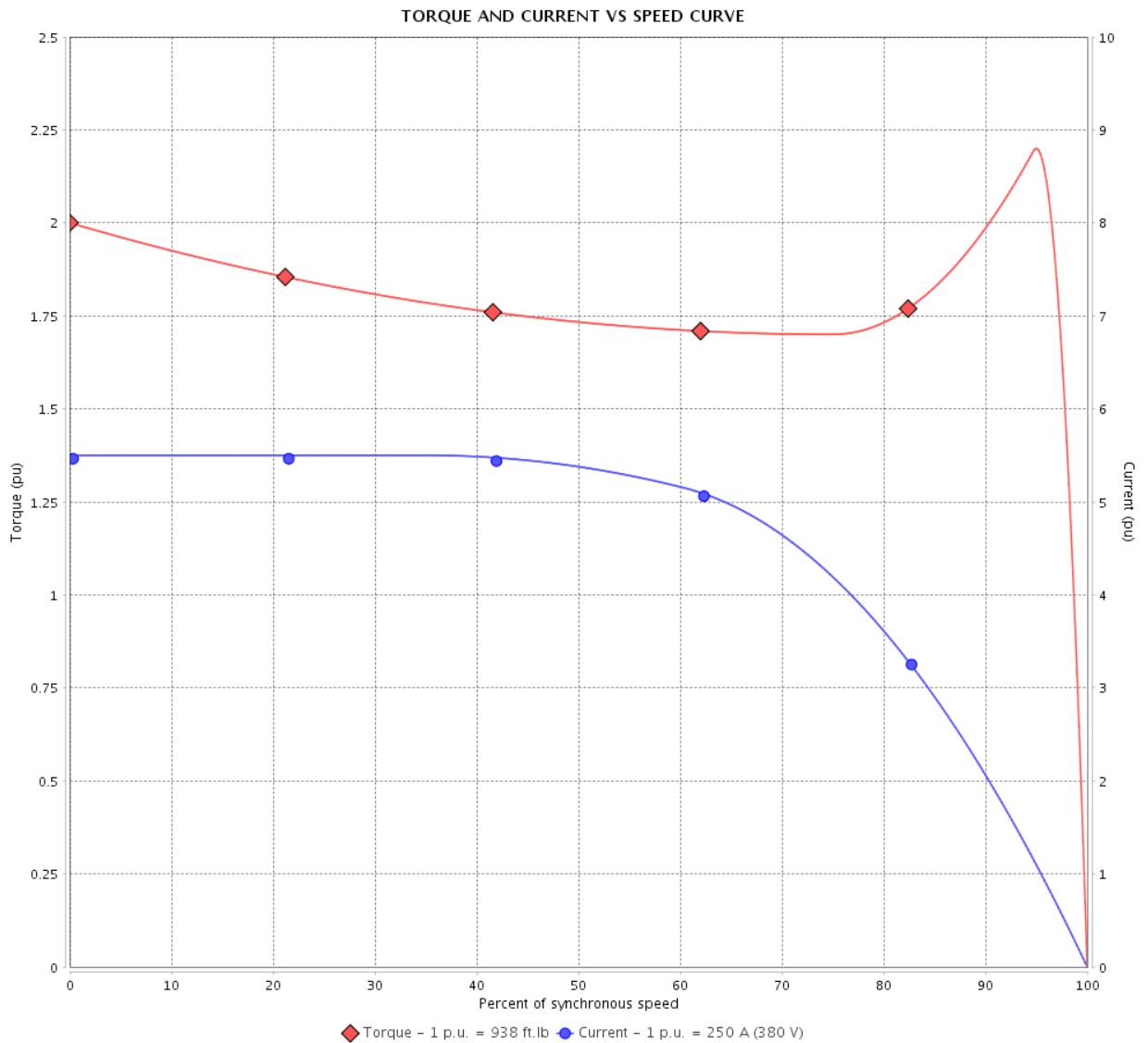
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Customer :

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Performance : 380 V 50 Hz 6P IE1

Rated current	: 250 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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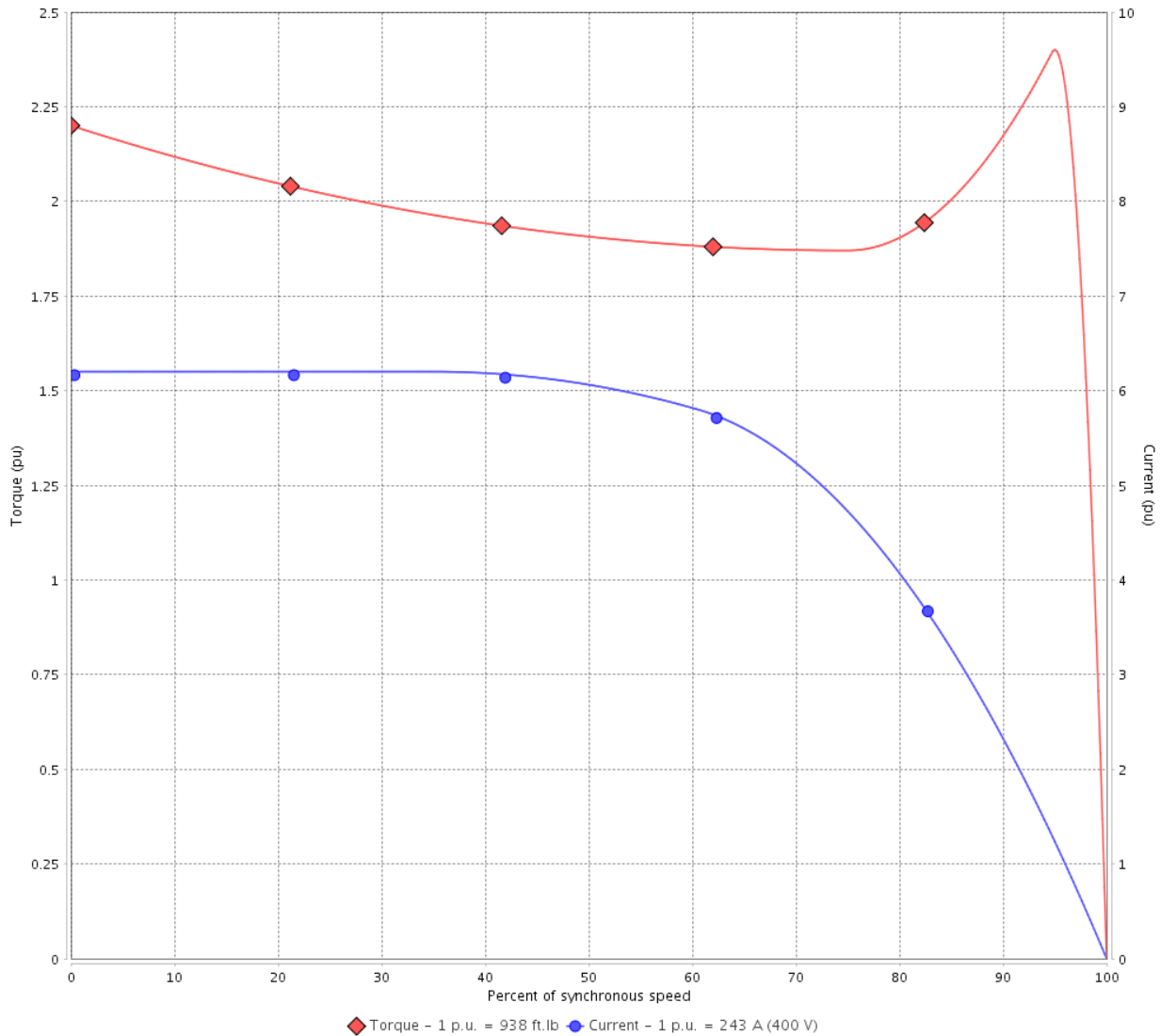
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE2

Rated current	: 243 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



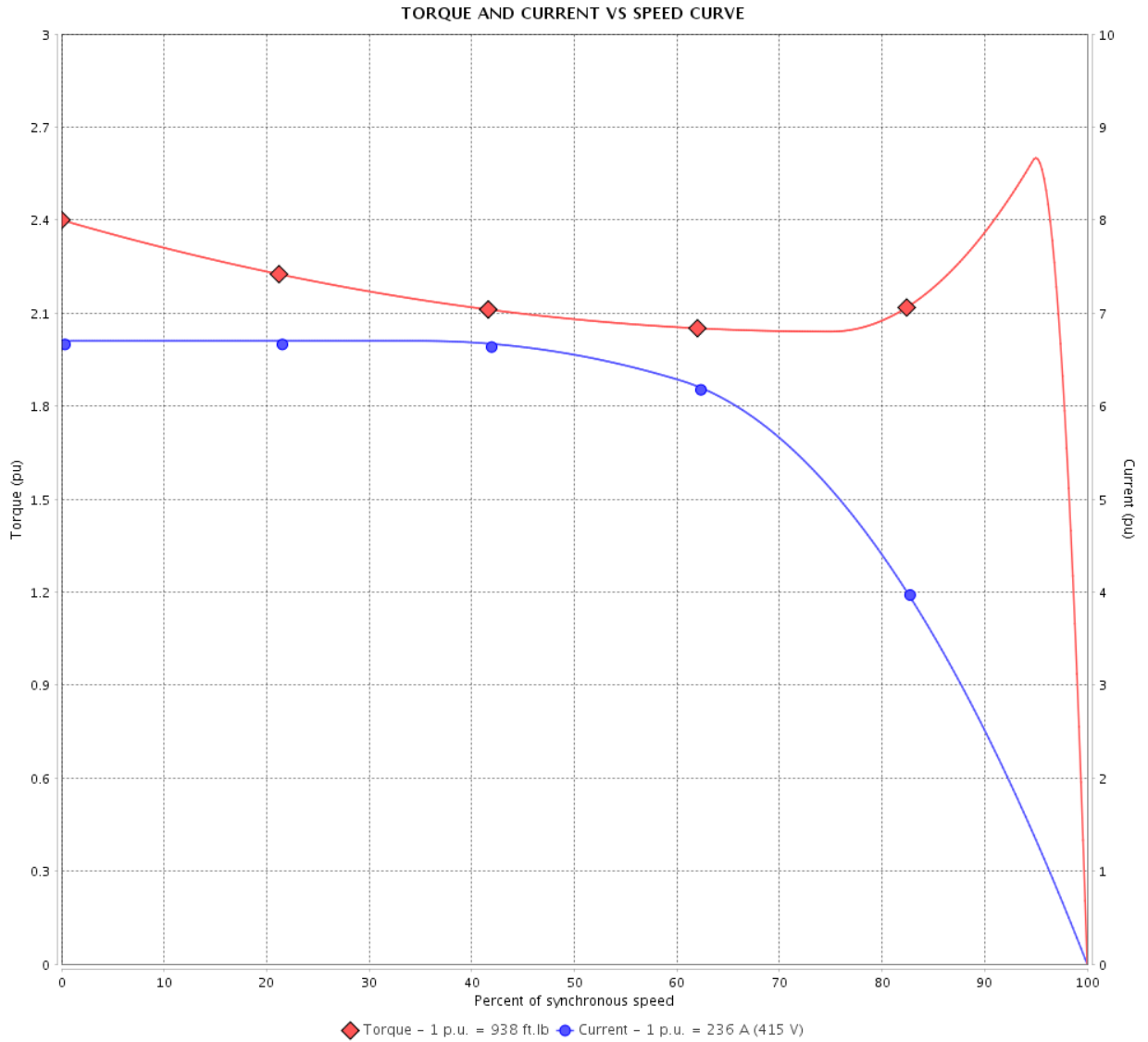
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Catalog # : 20012ST3QIERB449T-W2



Performance : 415 V 50 Hz 6P IE2

Rated current	: 236 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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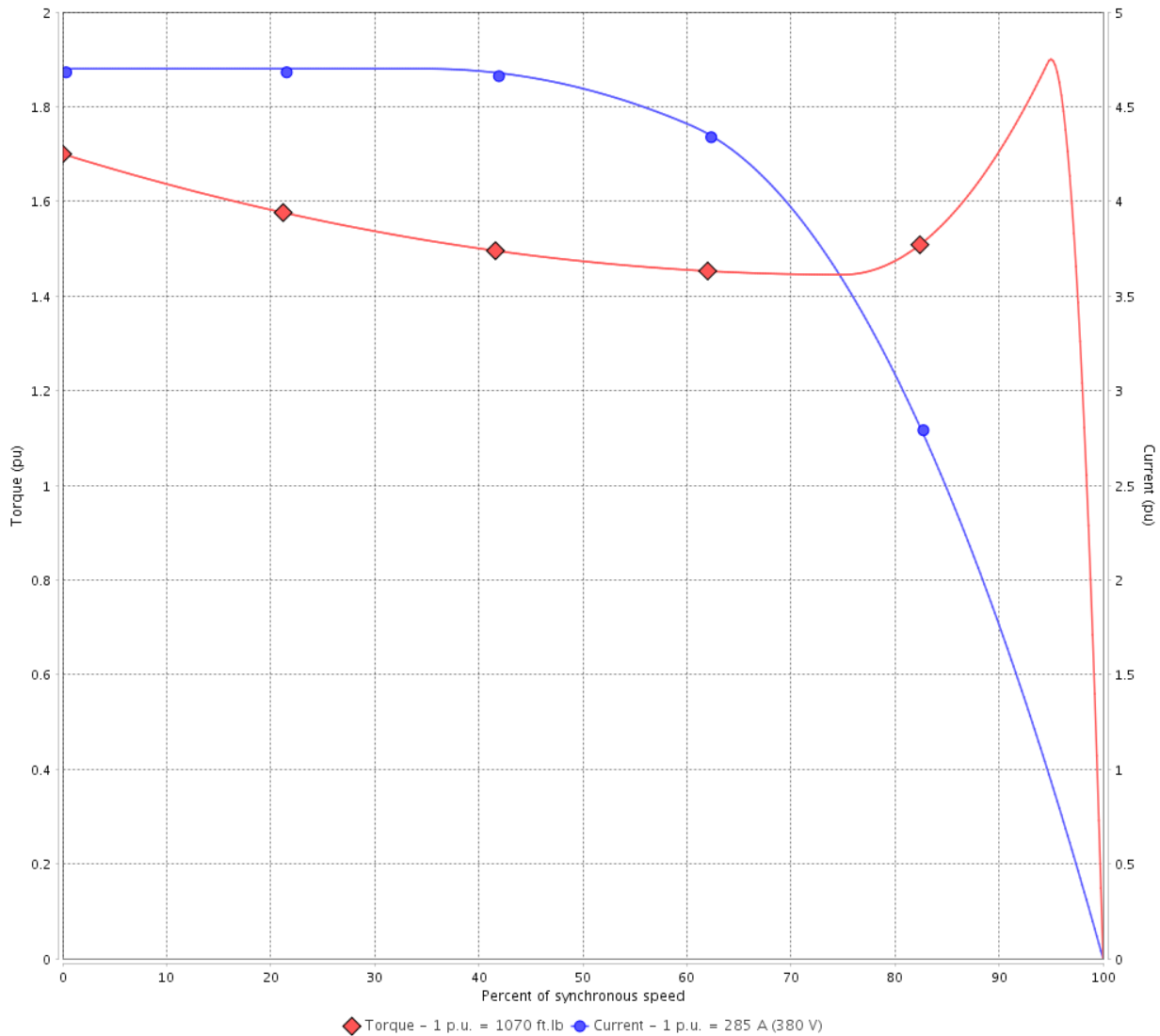
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Catalog # : 20012ST3QIERB449T-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current	: 285 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



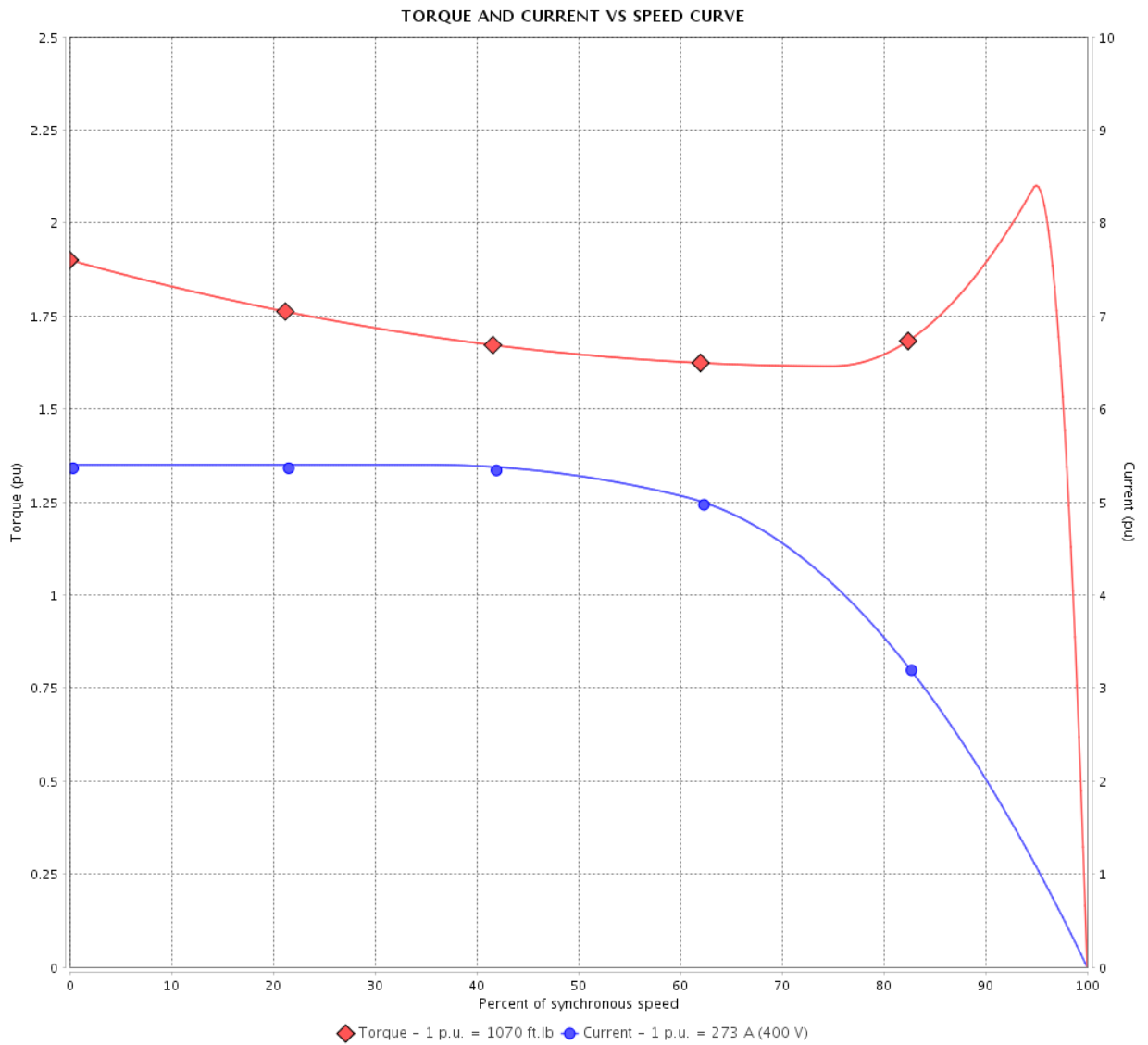
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Performance : 400 V 50 Hz 6P IE1

Rated current	: 273 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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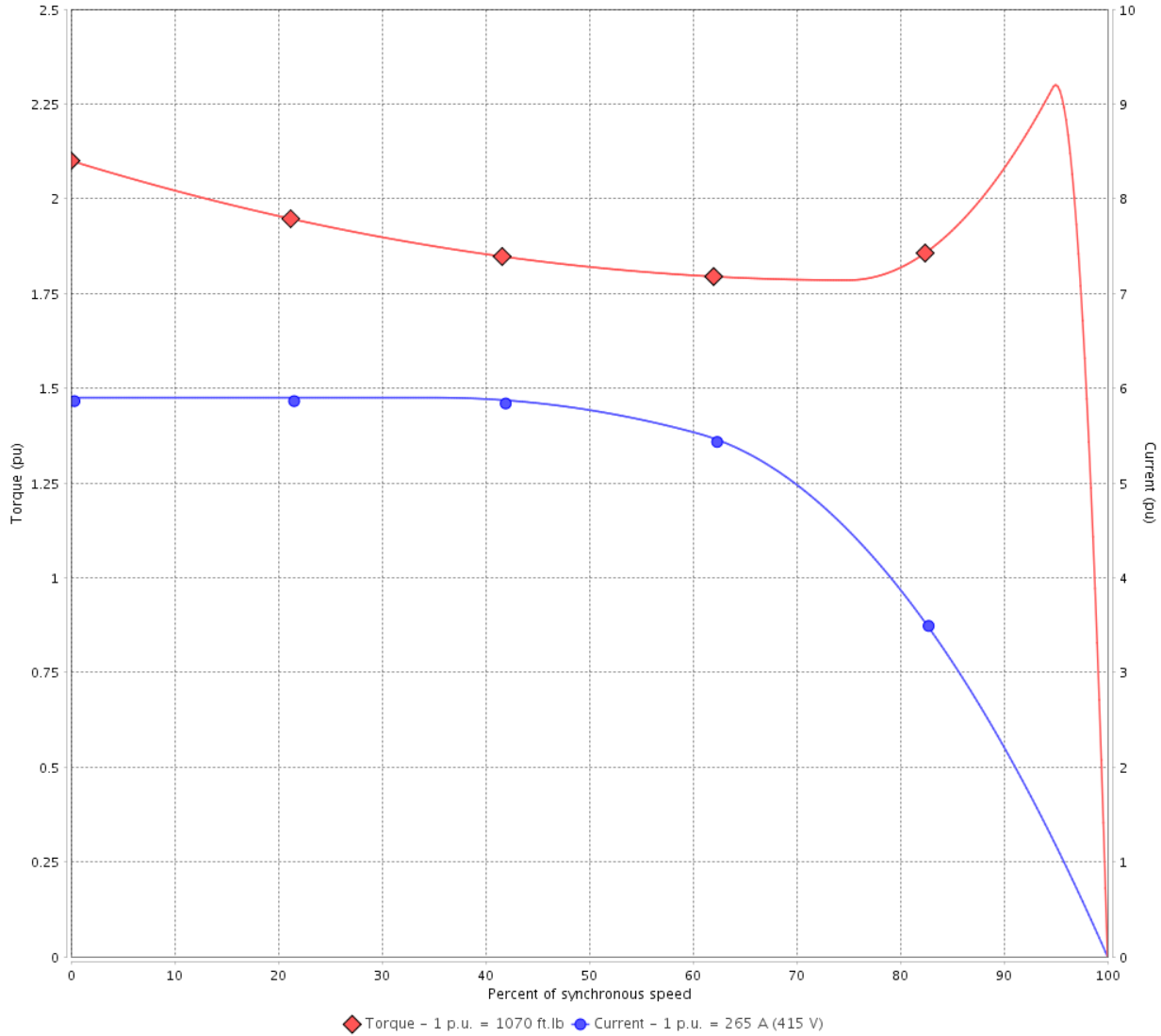
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Catalog # : 20012ST3QIERB449T-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current	: 265 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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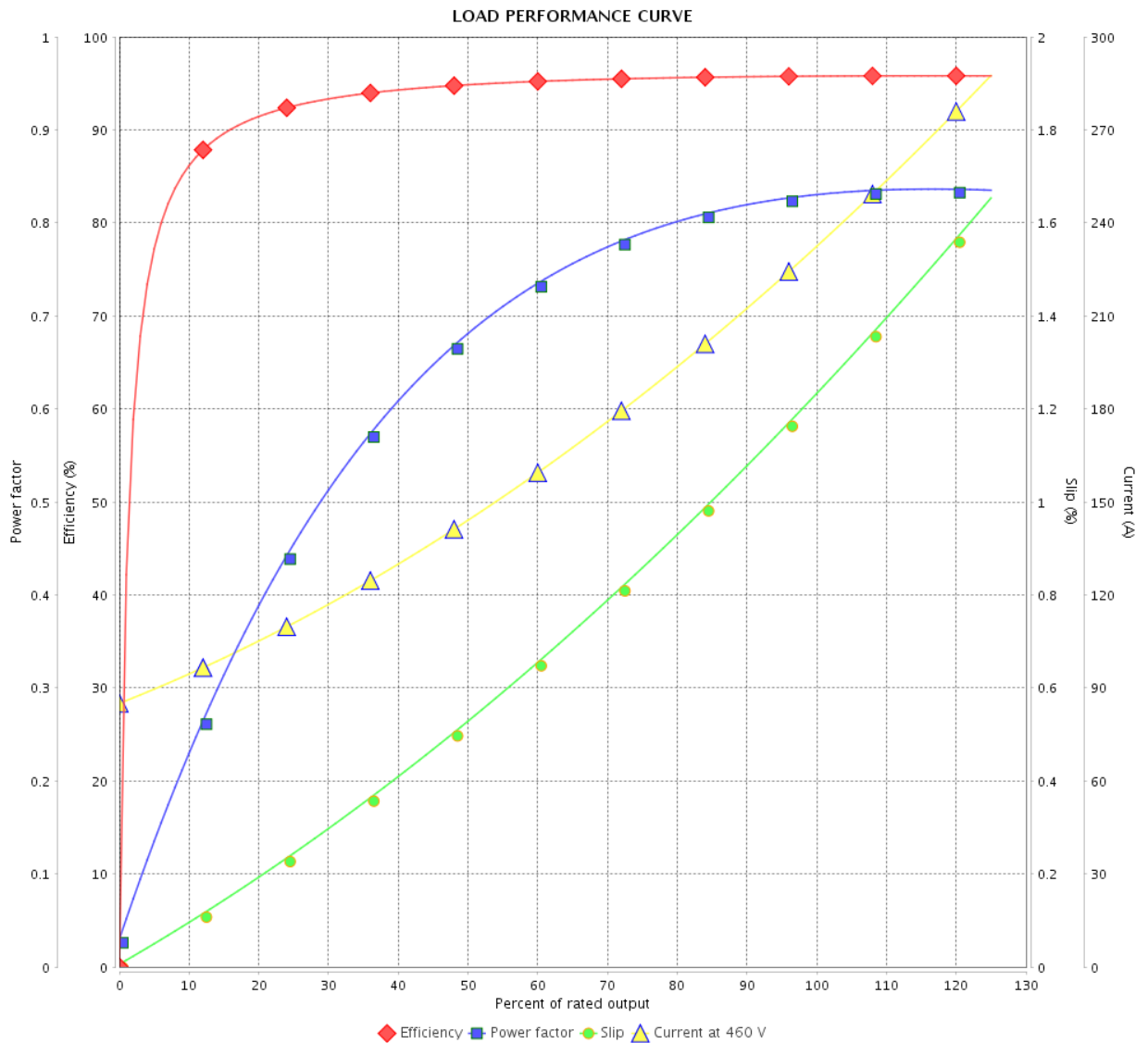


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Performance : 460 V 60 Hz 6P

Rated current : 237 A
 LRC : 6.1
 Rated torque : 886 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

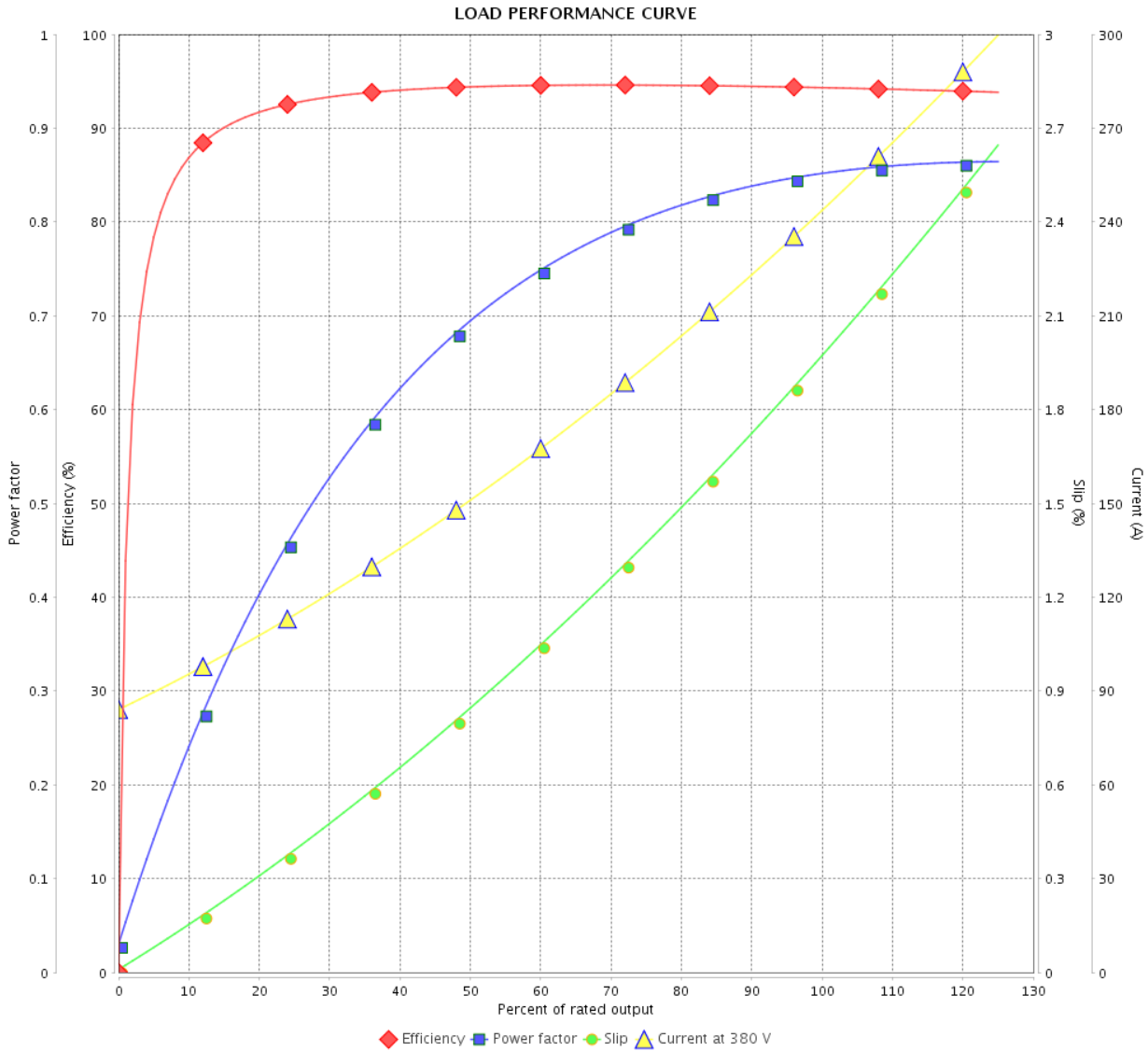


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Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 380 V 50 Hz 6P IE1

Rated current : 250 A
 LRC : 5.5
 Rated torque : 938 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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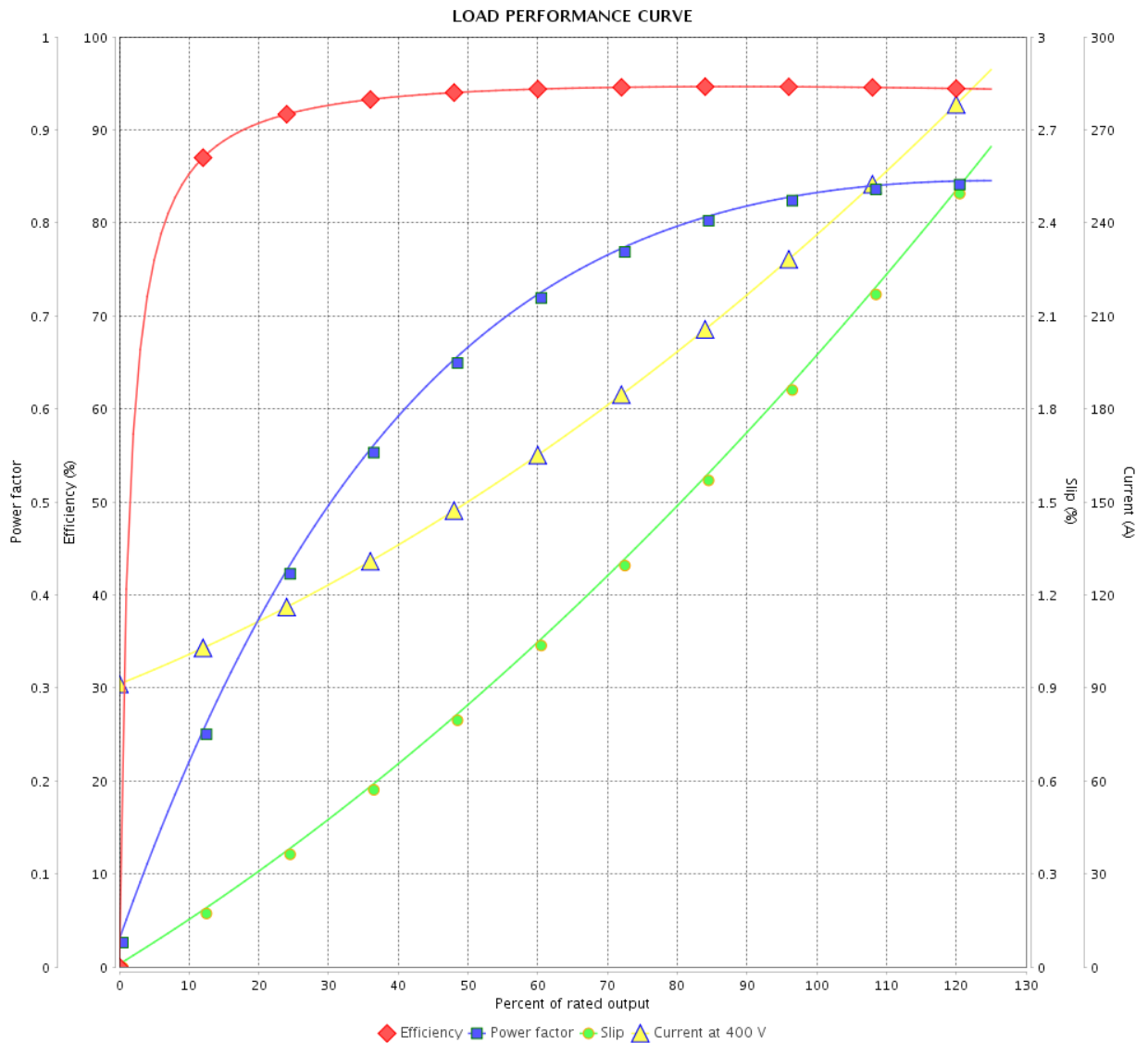


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Catalog # : 20012ST3QIERB449T-W2



Performance : 400 V 50 Hz 6P IE2

Rated current : 243 A
 LRC : 6.2
 Rated torque : 938 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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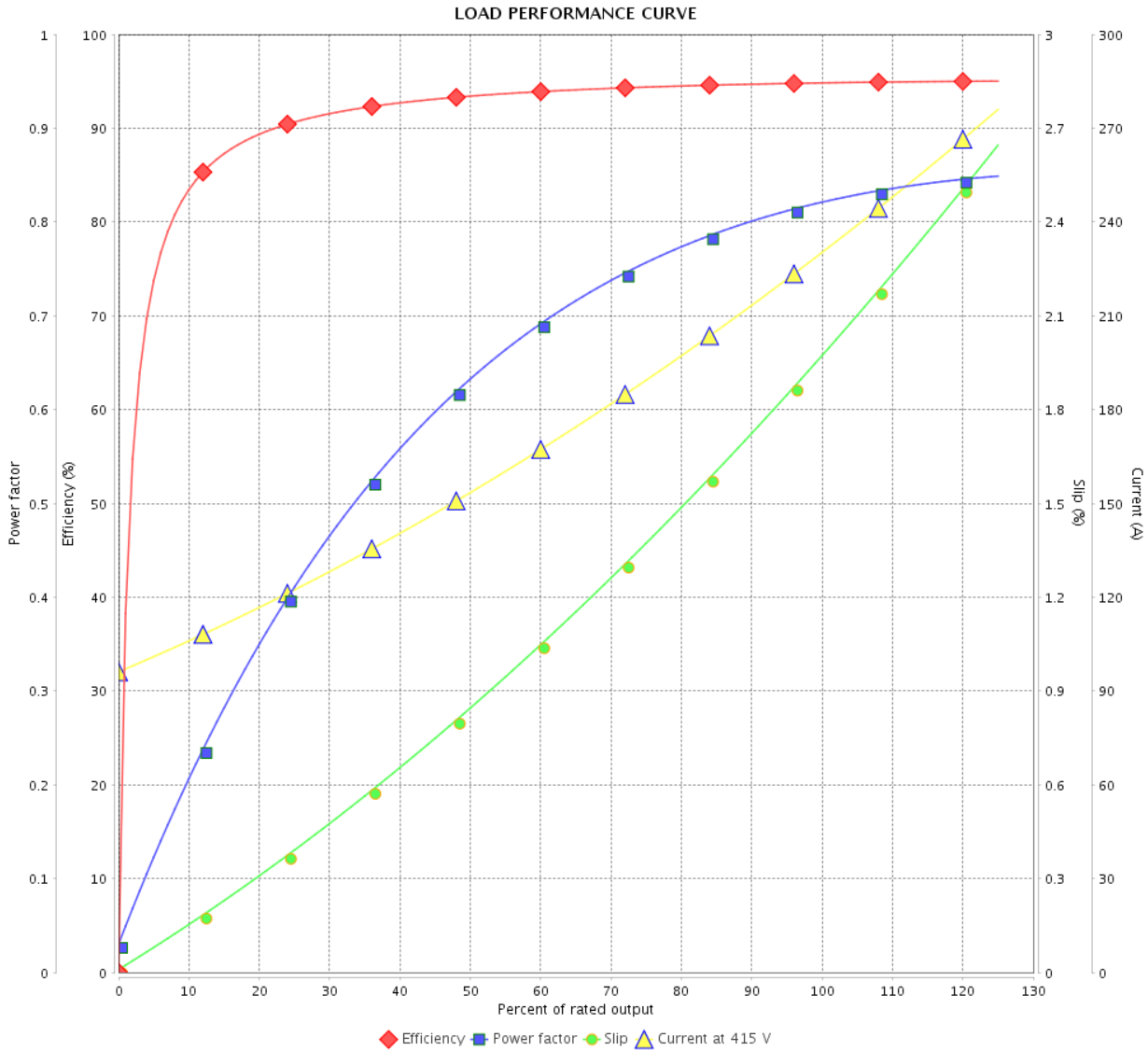


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Performance : 415 V 50 Hz 6P IE2

Rated current	: 236 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

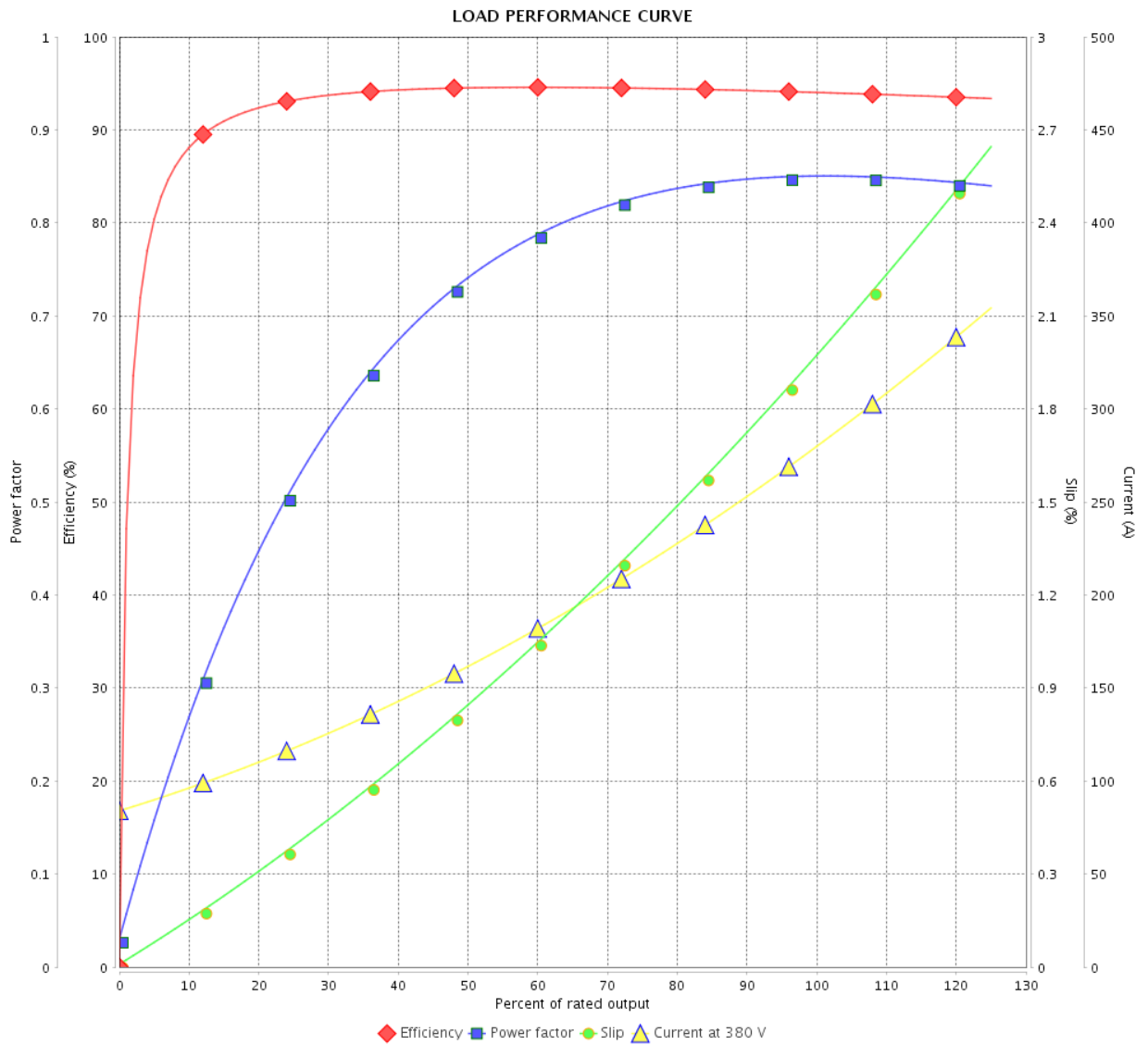


Customer :

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Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 380 V 50 Hz 6P IE1

Rated current : 285 A
 LRC : 4.7
 Rated torque : 1070 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 190 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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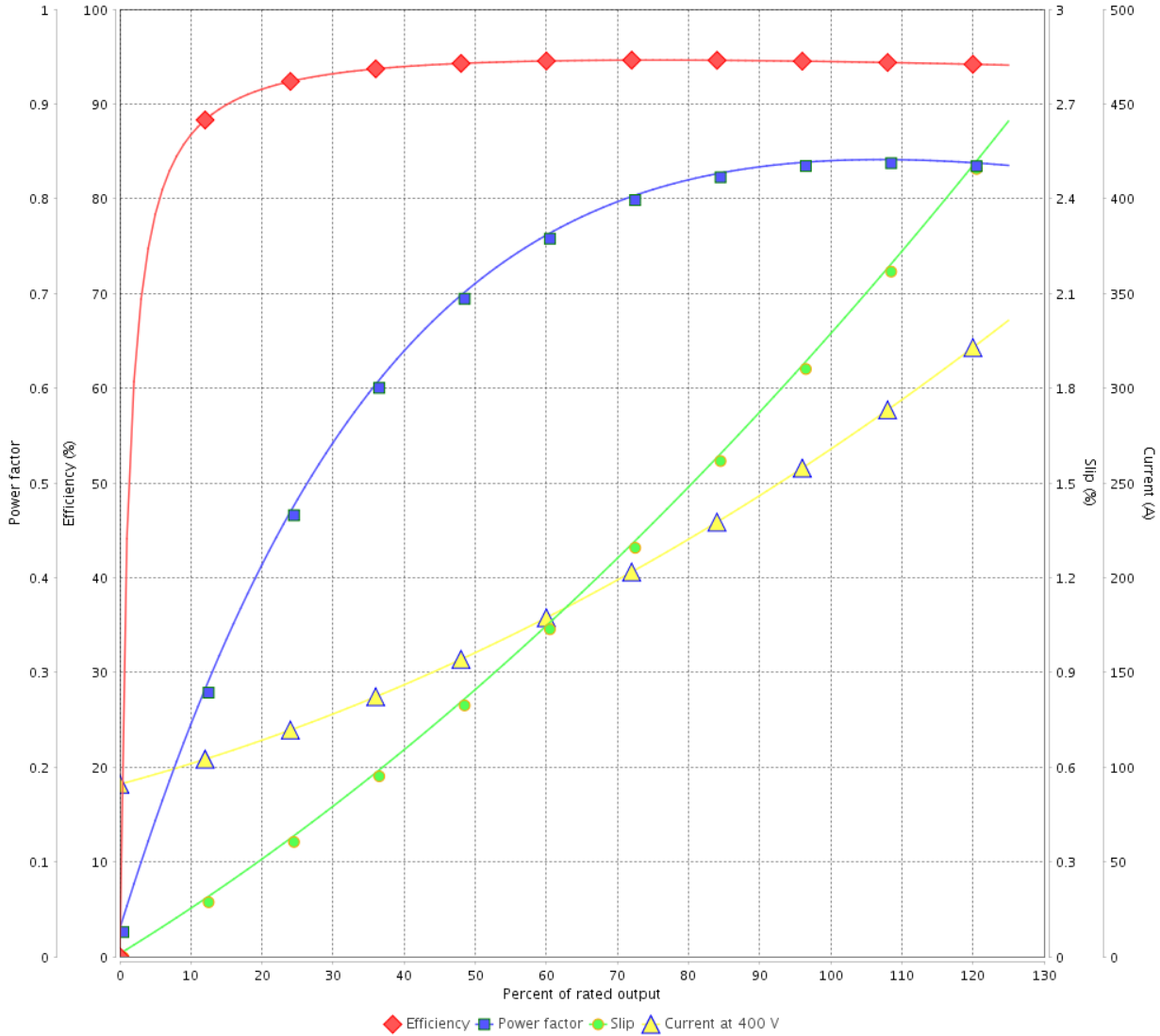
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE1

Rated current	: 273 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

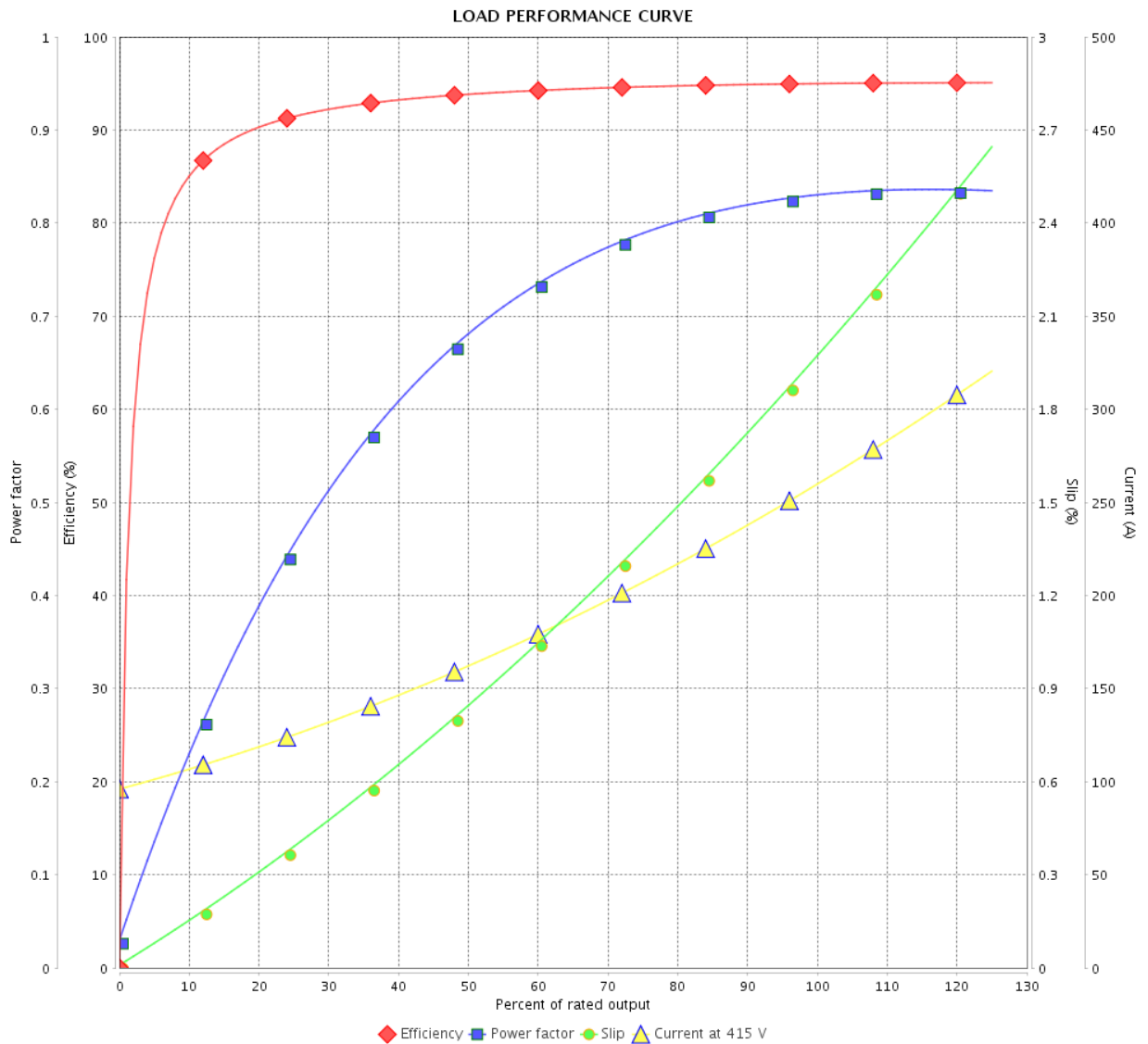


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 415 V 50 Hz 6P IE2

Rated current : 265 A
 LRC : 5.9
 Rated torque : 1070 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 229 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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THERMAL LIMIT CURVE



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Rated torque	: 886 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

Heating constant

Cooling constant

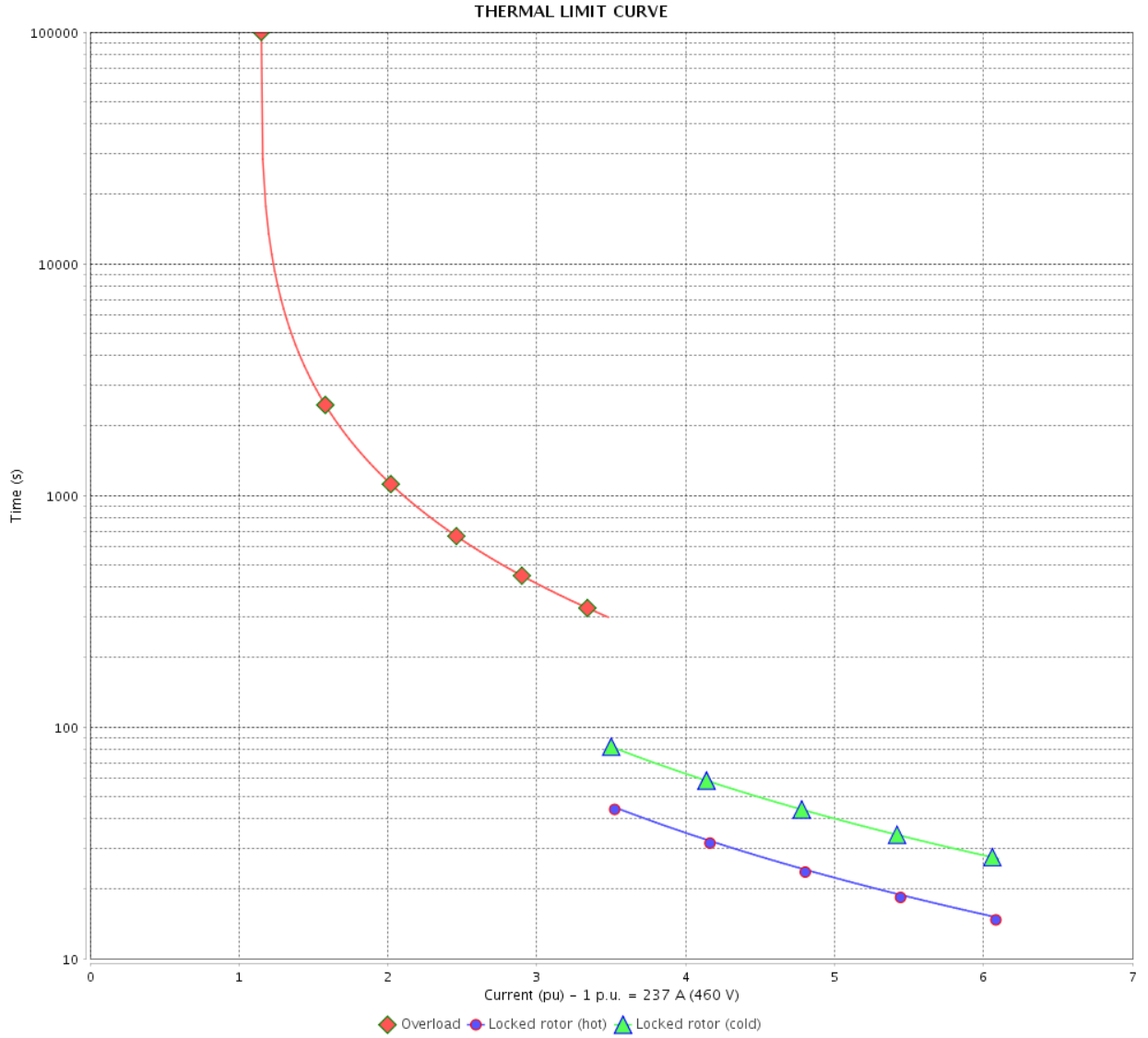
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performance : 380 V 50 Hz 6P IE1

Rated current	: 250 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
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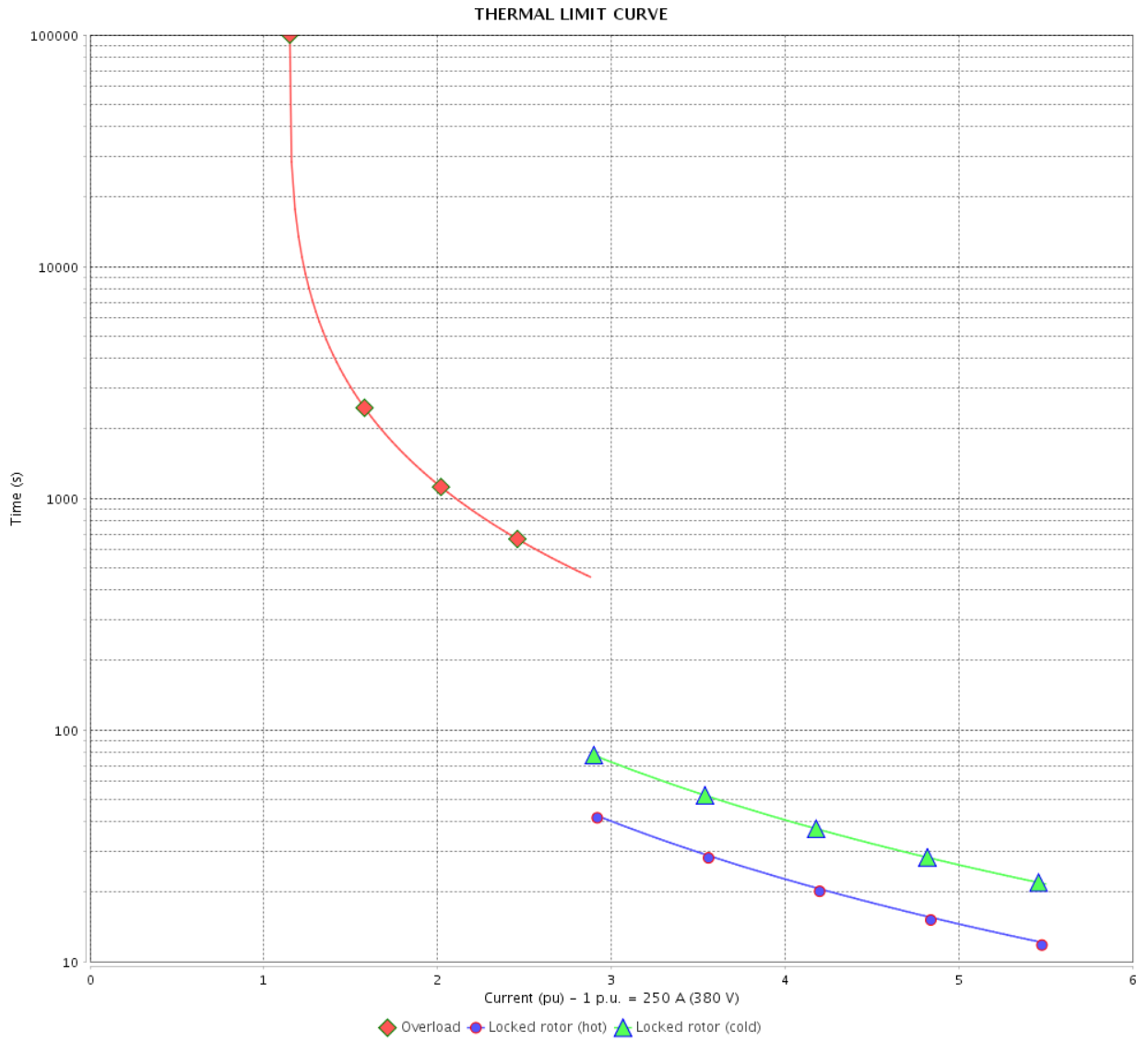
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Rated current	: 243 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
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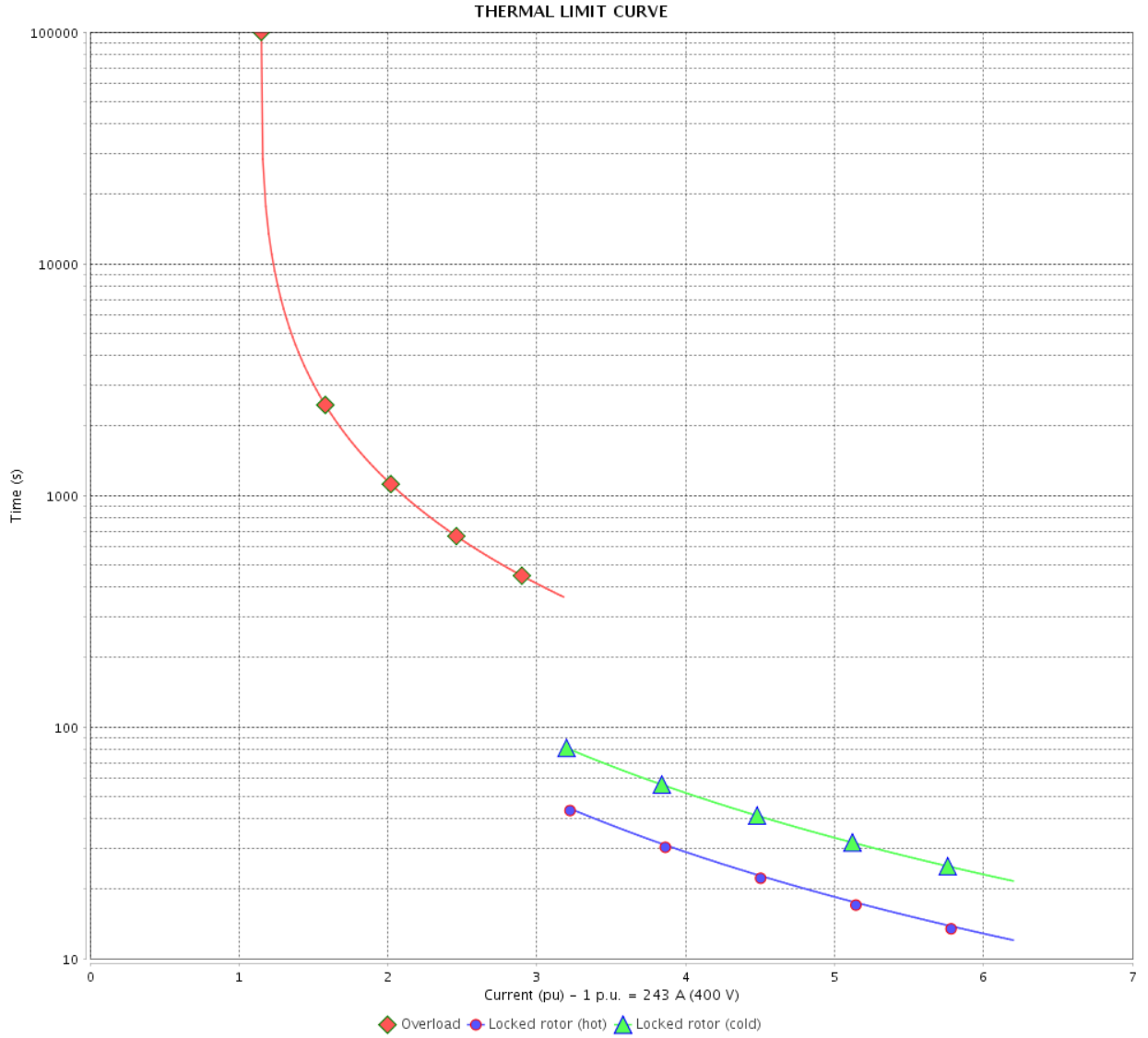
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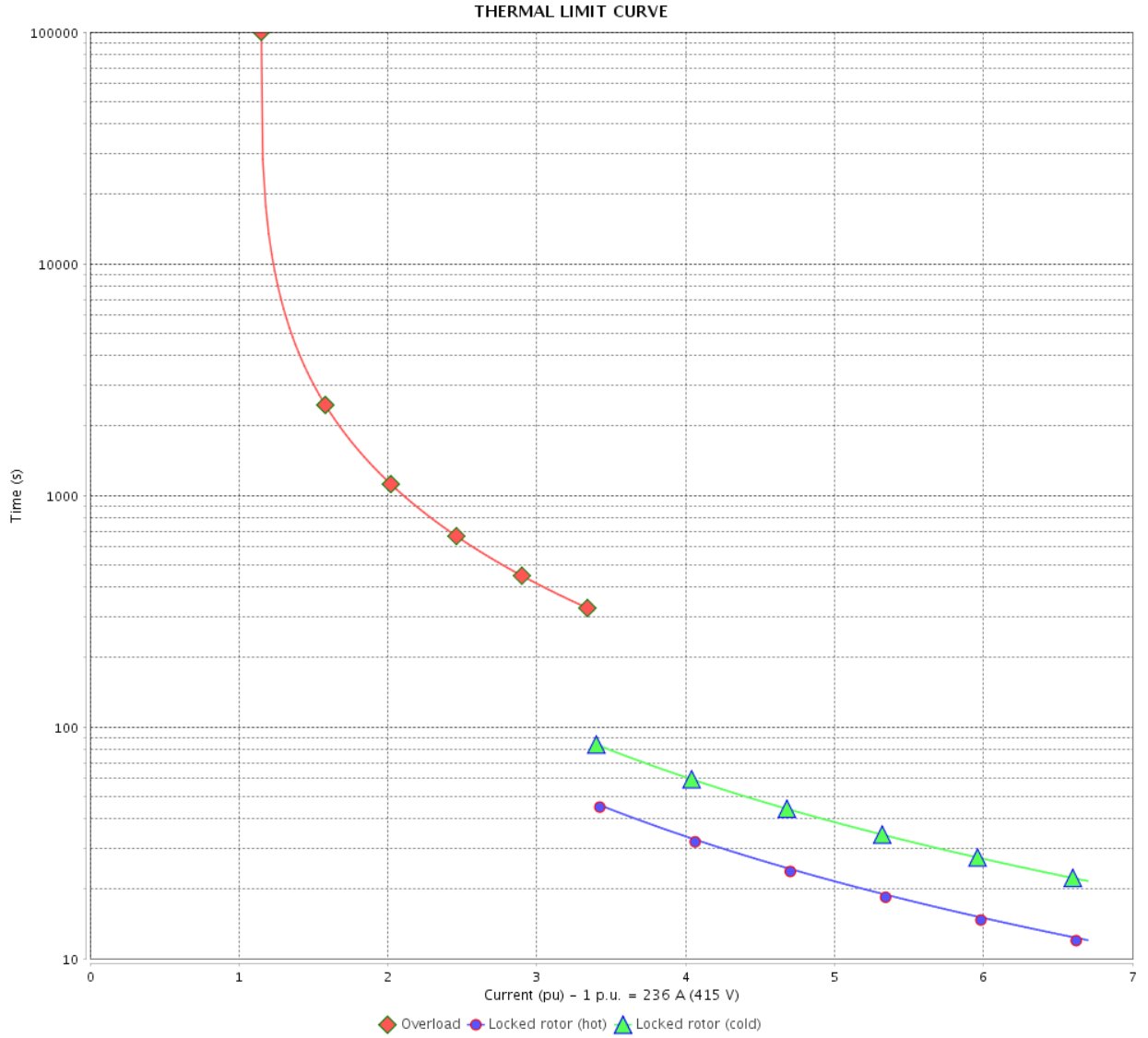
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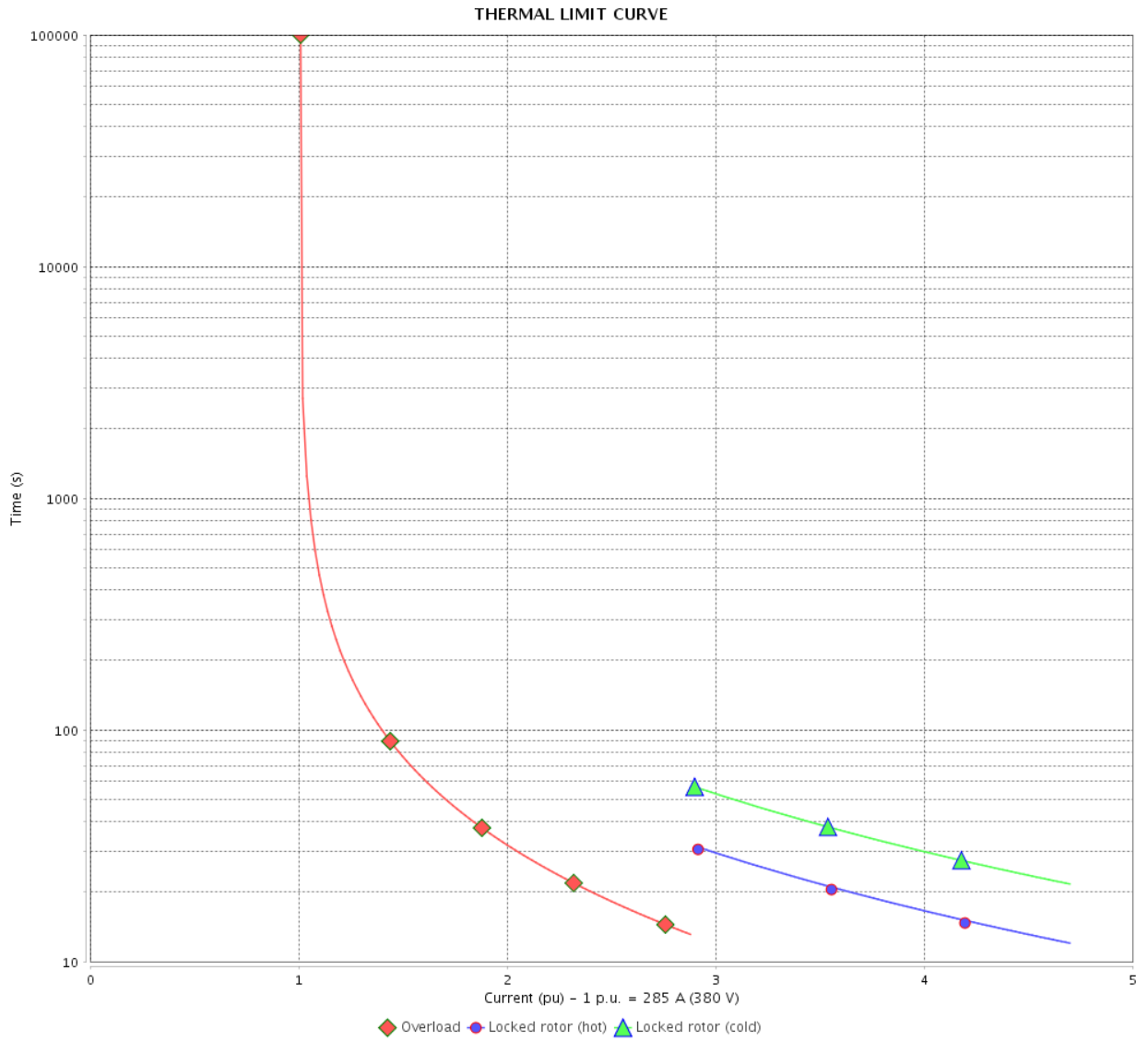
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Heating constant

Cooling constant

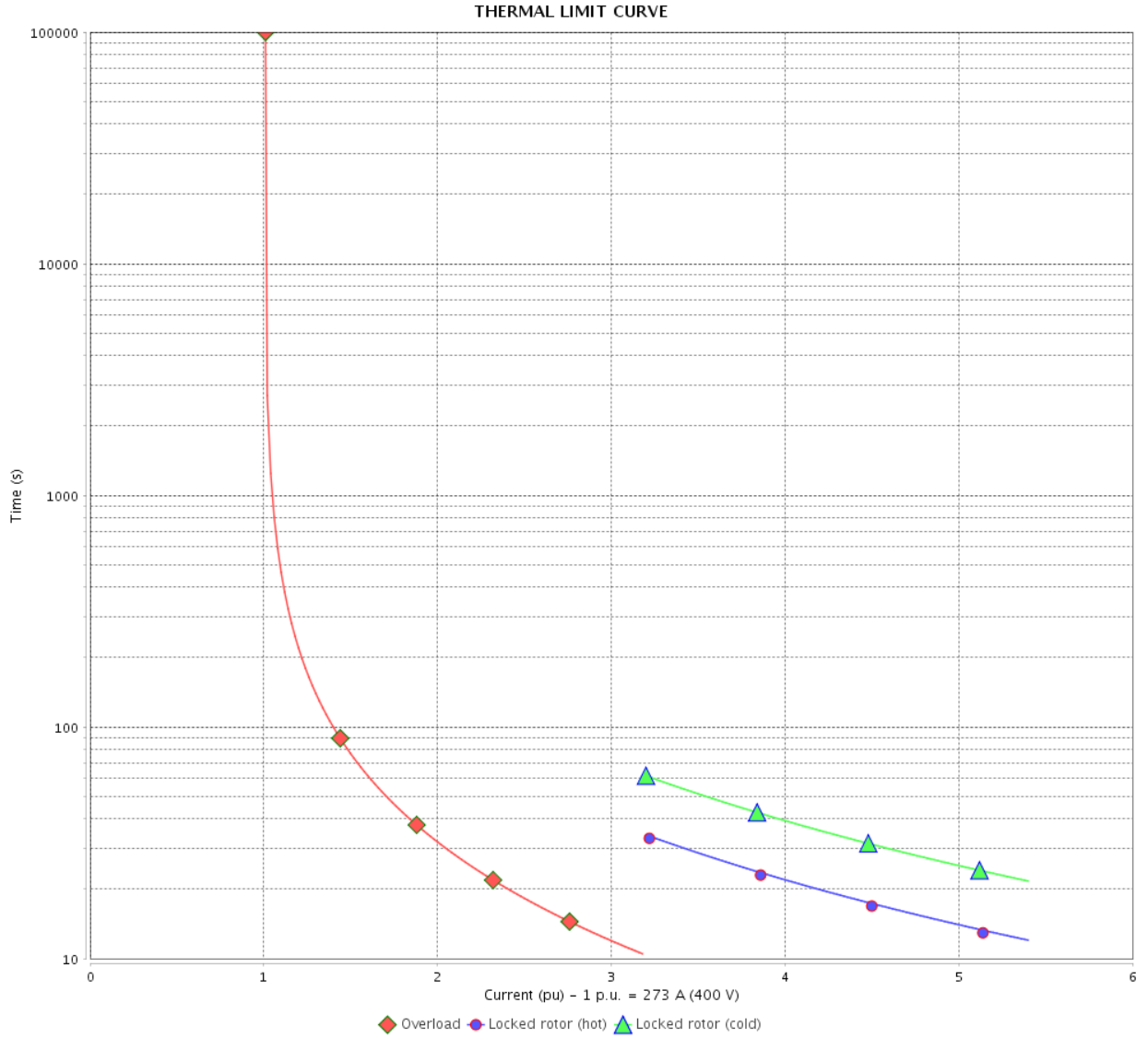
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		26 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			27 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 11432182
Catalog # : 20012ST3QIERB449T-W2

Performance : 415 V 50 Hz 6P IE2

Rated current	: 265 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Heating constant

Cooling constant

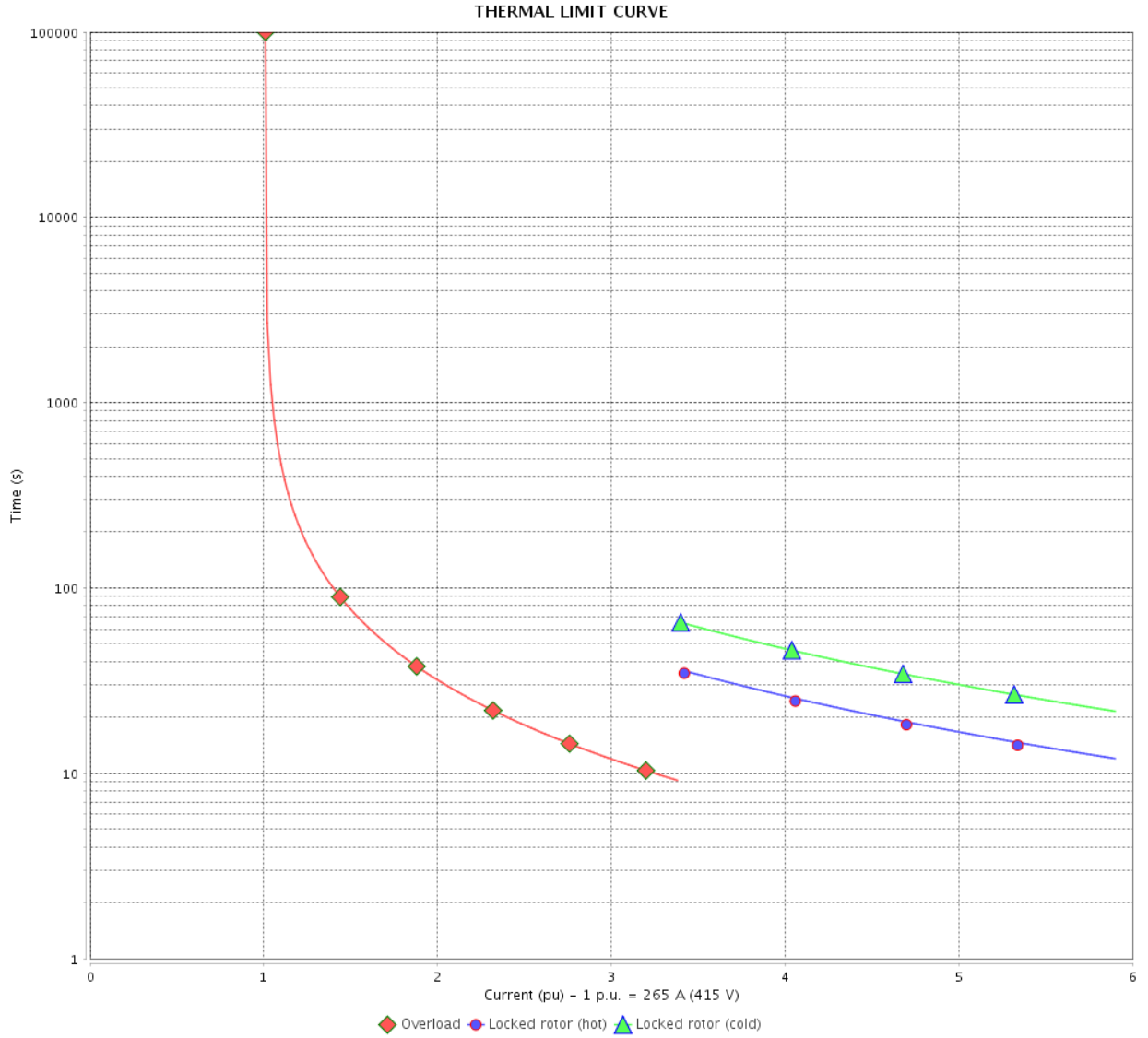
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		28 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 29 / 36		Revision
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

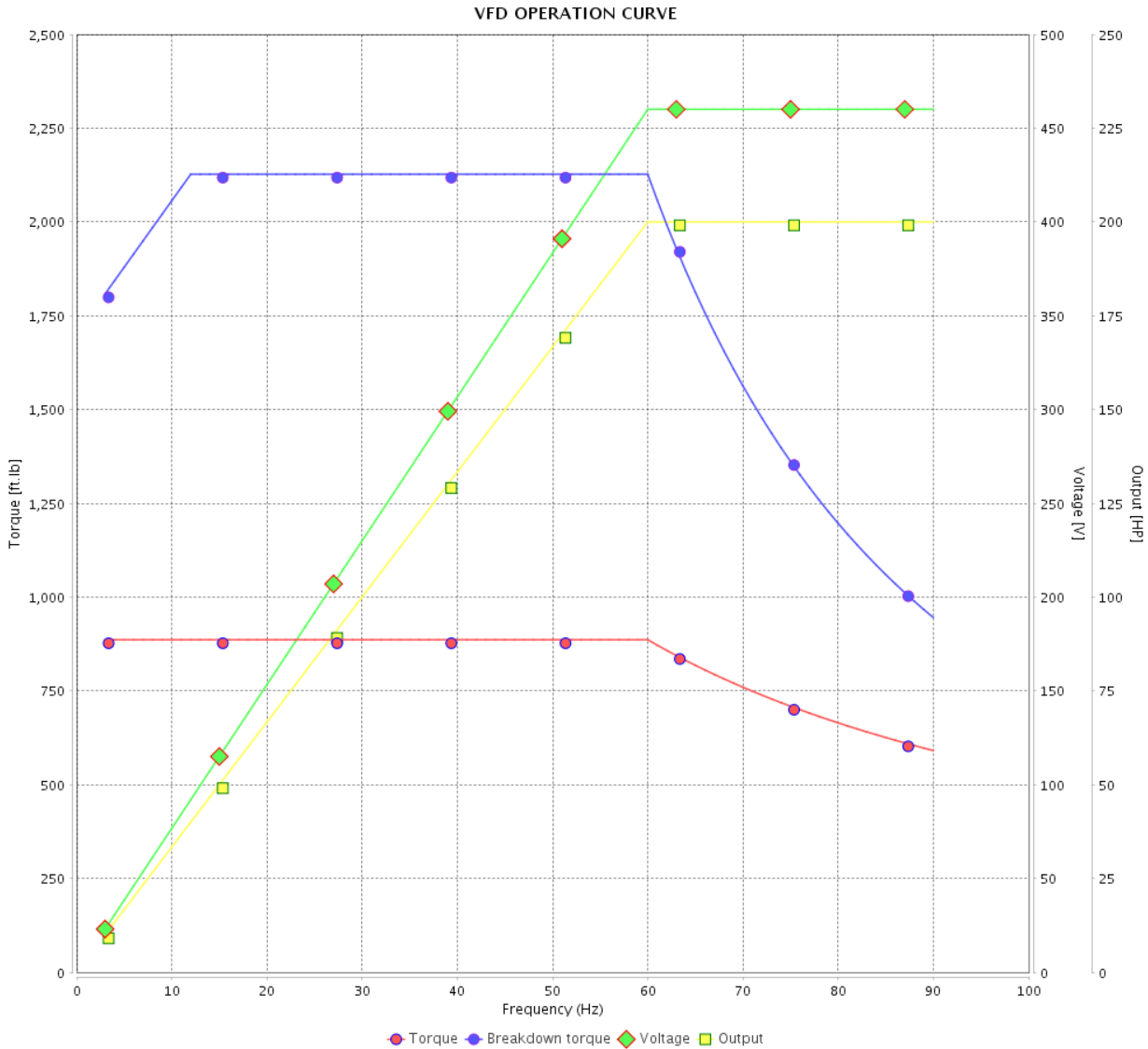


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 460 V 60 Hz 6P

Rated current : 237 A
 LRC : 6.1
 Rated torque : 886 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 30 / 36	Revision
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

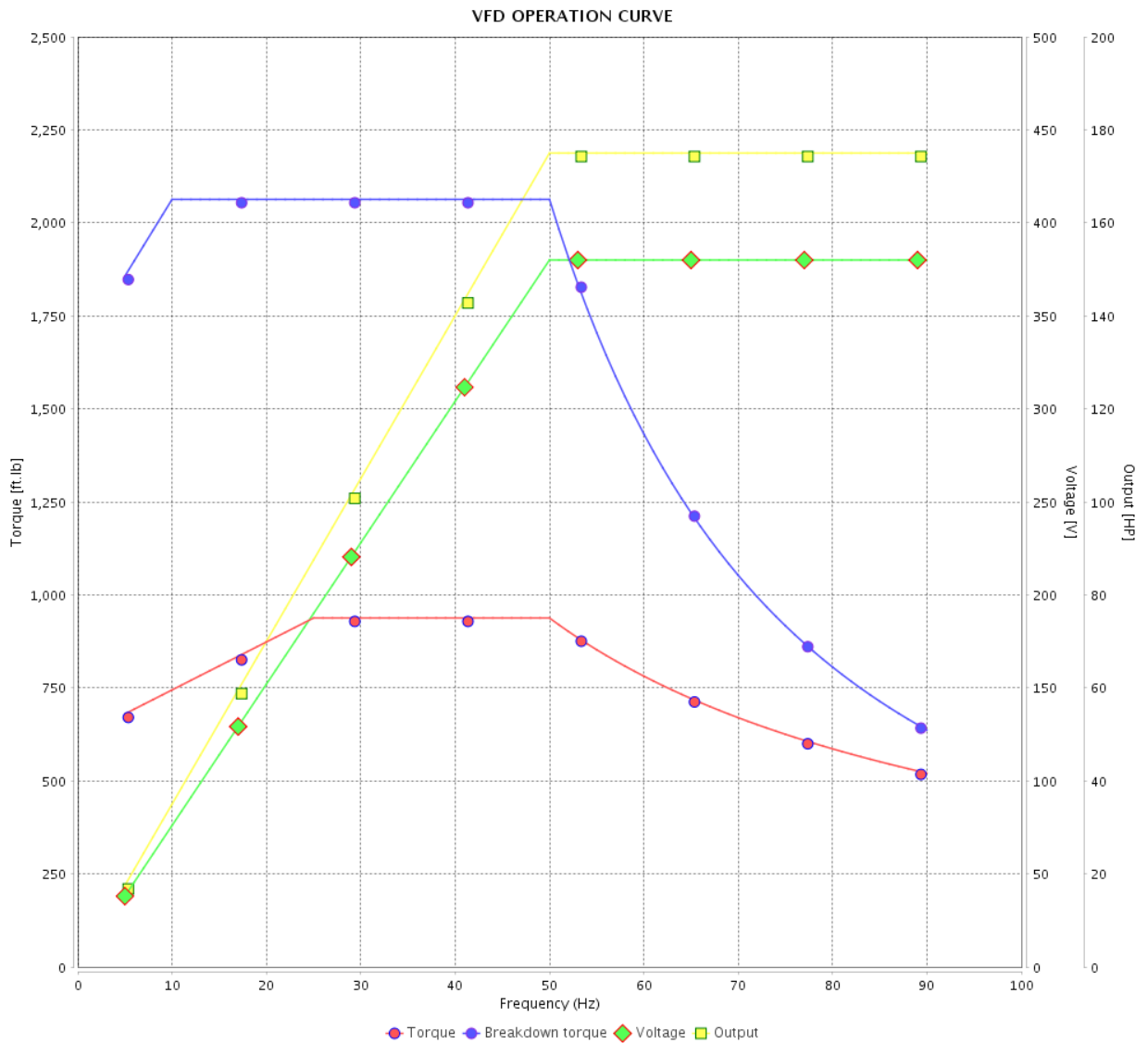


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 380 V 50 Hz 6P IE1

Rated current : 250 A
 LRC : 5.5
 Rated torque : 938 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 220 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
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Date		14/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



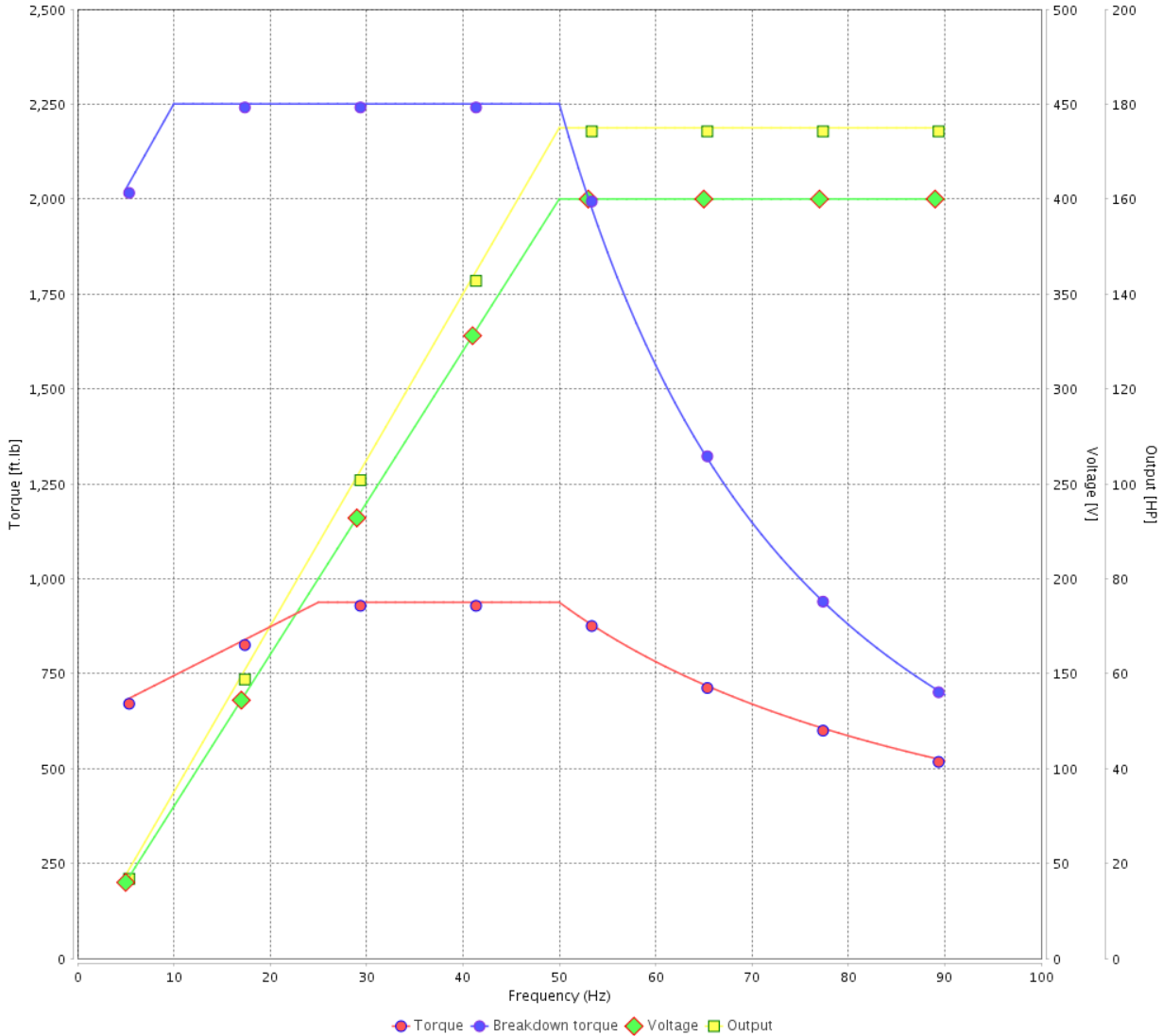
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE2

Rated current	: 243 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 938 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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Performed by			Page 32 / 36	Revision
Checked by				
Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

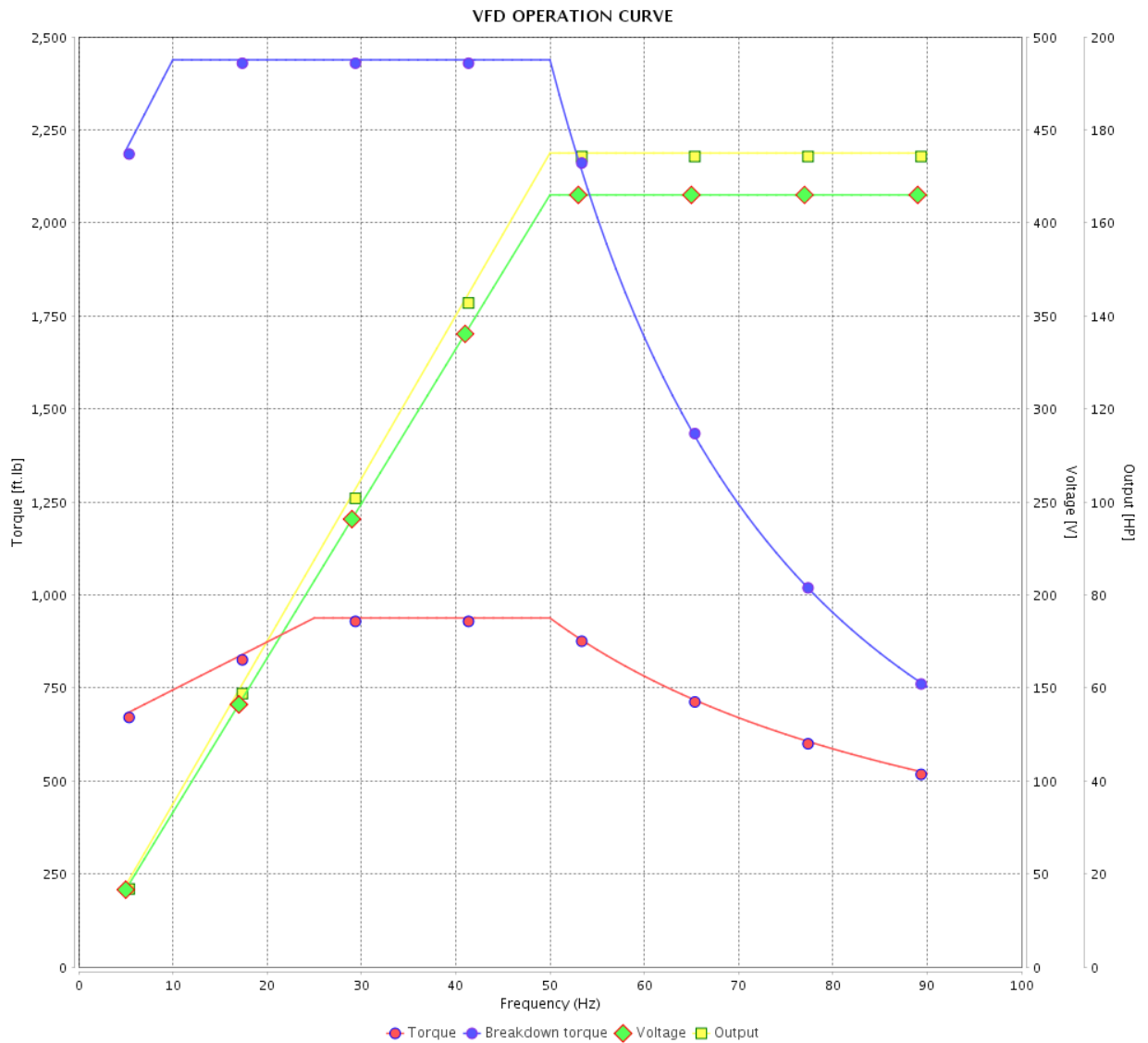


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 415 V 50 Hz 6P IE2

Rated current : 236 A
 LRC : 6.7
 Rated torque : 938 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



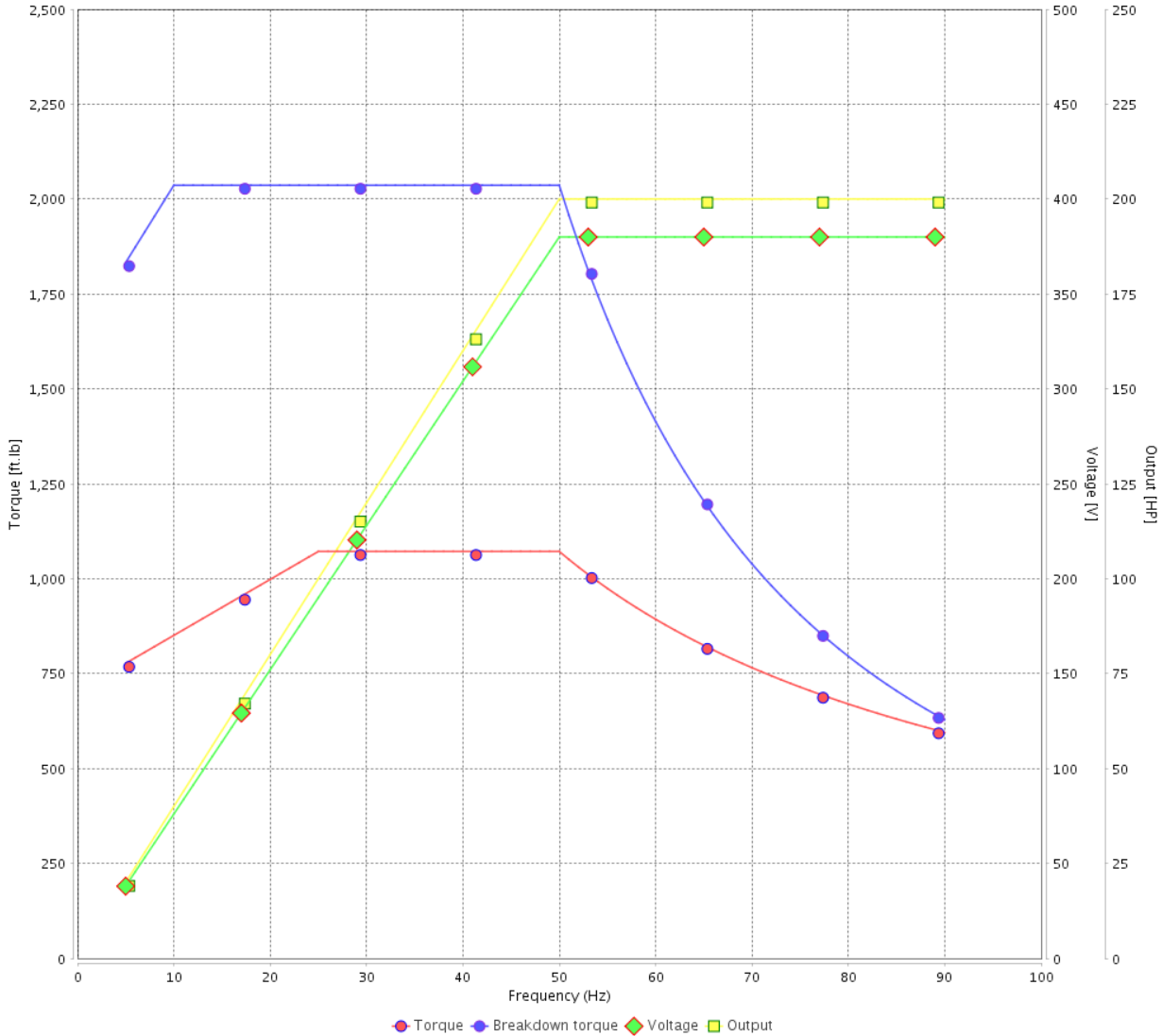
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current	: 285 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

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Performed by		Page		Revision
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Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

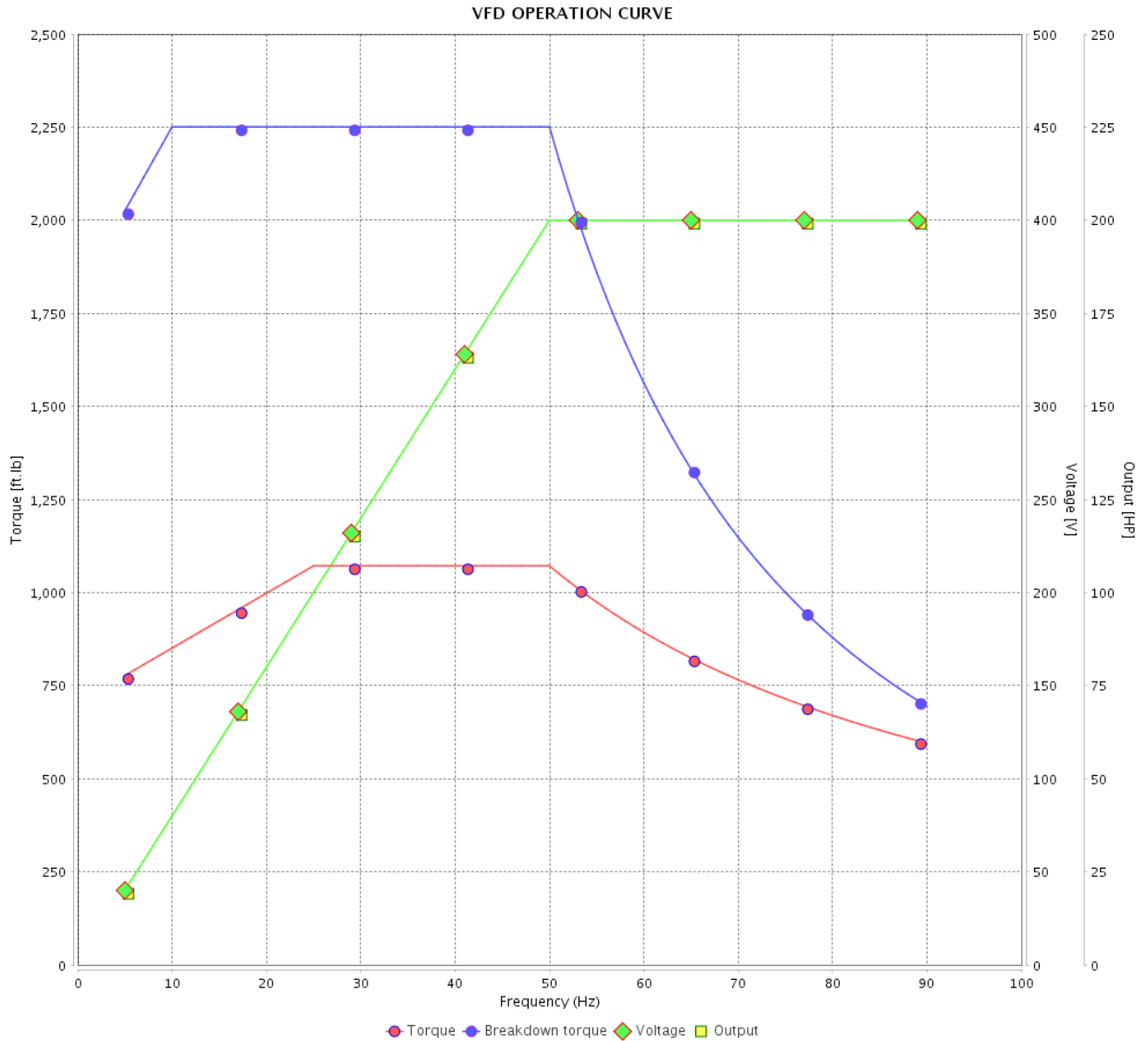


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

Catalog # : 20012ST3QIERB449T-W2



Performance : 400 V 50 Hz 6P IE1

Rated current : 273 A
 LRC : 5.4
 Rated torque : 1070 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 210 %
 Rated speed : 980 rpm

Moment of inertia (J) : 145 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		35 / 36		
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

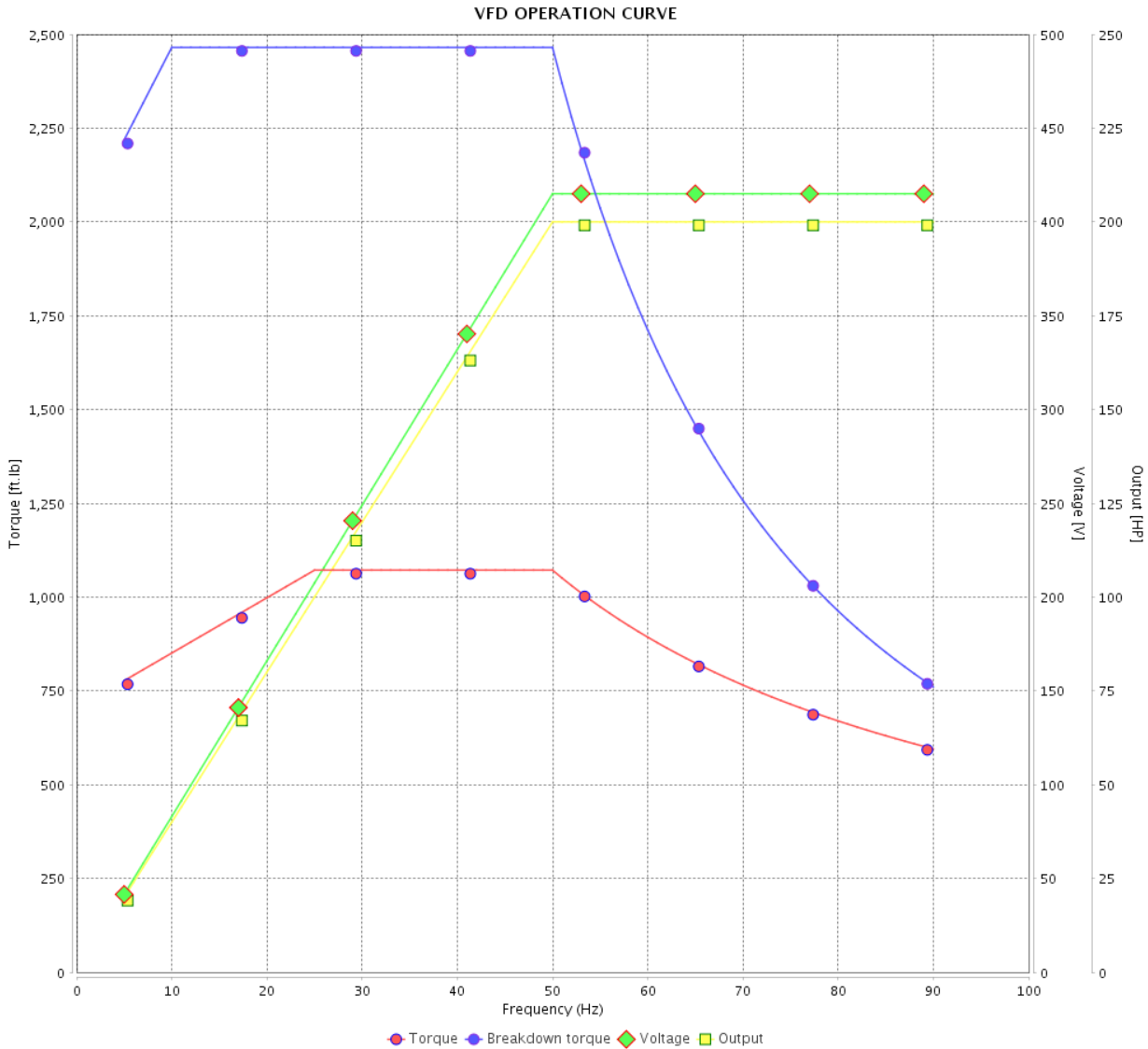


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432182

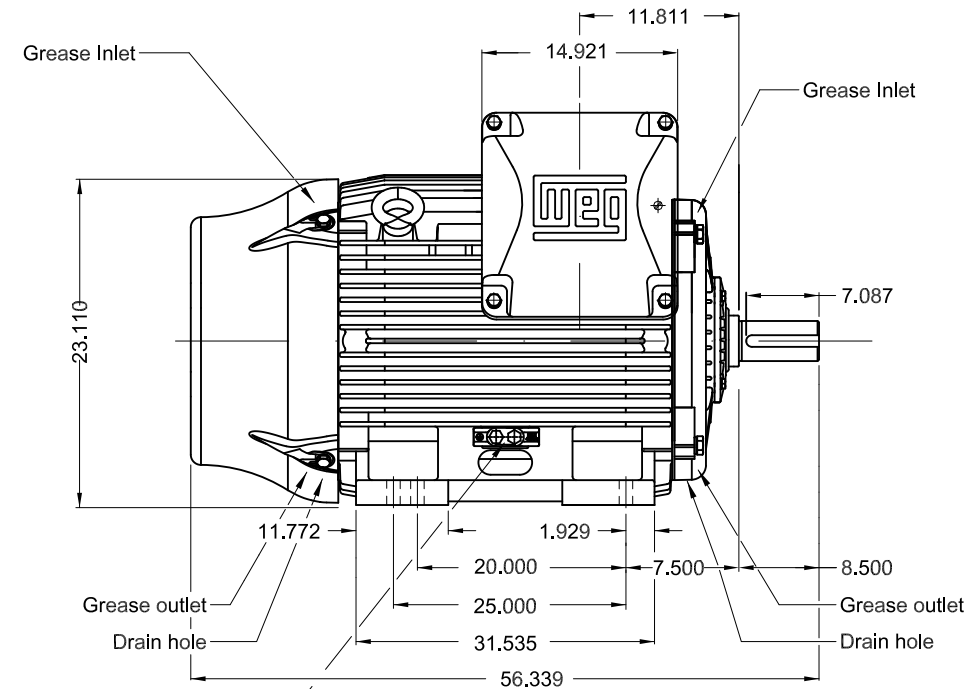
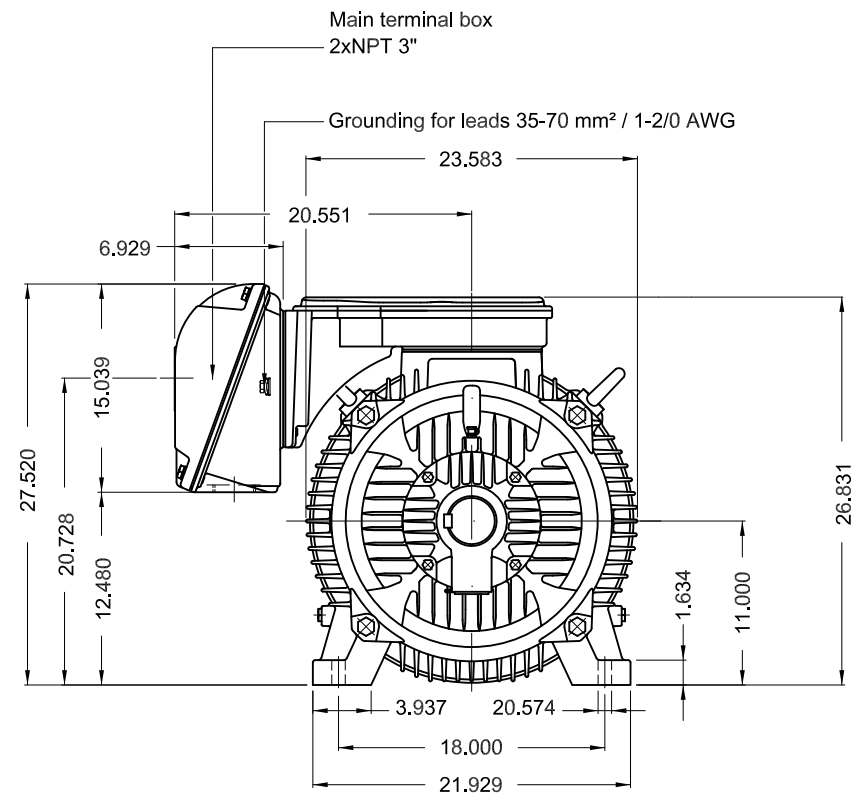
Catalog # : 20012ST3QIERB449T-W2



Performance : 415 V 50 Hz 6P IE2

Rated current	: 265 A	Moment of inertia (J)	: 145 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 1070 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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Checked by				
Date	14/04/2022			



Grounding for leads 25-185 mm² / 3AWG-350MCM

200 HP 06 Poles 60 Hz

A

Without vertical jackscrews

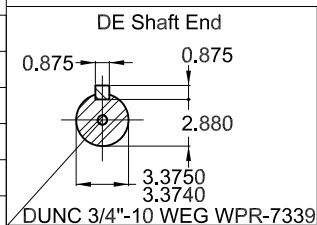
DE roller bearing

Shaft locking device

Color RAL 5009

Painting plan 202E

Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 447/9T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW

WDD





NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A



Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T3C
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3

MODEL 20012ST3QIERB449T-W2



Inverter Duty Motor
Severe Duty

MADE IN BRAZIL
11432182

PH3 60Hz Fr. 447/9T 1000m.a.s.l. IP55 TEFC 2862lb

V 460

A 237

HP 200

kW 150

SF 1.15

SFA 273

RPM 1185

PF 0.83

AMB 40°C

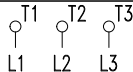
INS cl. F DT80K

NEMA NOM EFF 95.8%

DUTY CONT.

DES B Code G

GUARANT. EFF 95.0%



460V



→ NU-322-C3 (60g) 110RU03X30

→ 6319-C3 (45g) 95BC03X30



MOBIL POLYREX EM (7000h)

